

MacAddict

Annual Troubleshooting Superguide

50 OS X BUGS DESTROYED!

Hardware, Software, System, Networking:
All Your OS X Problems Solved—For Good



THE SOUNDS OF STAR WARS

How Macs created a blockbuster's soundtrack

iMOVIE EDITING: LESS IS MORE

Learn professional video tricks—like taste and style

INSTALL OS X ON OLDER MACS

Think your Mac can't crash the OS X party? Think again

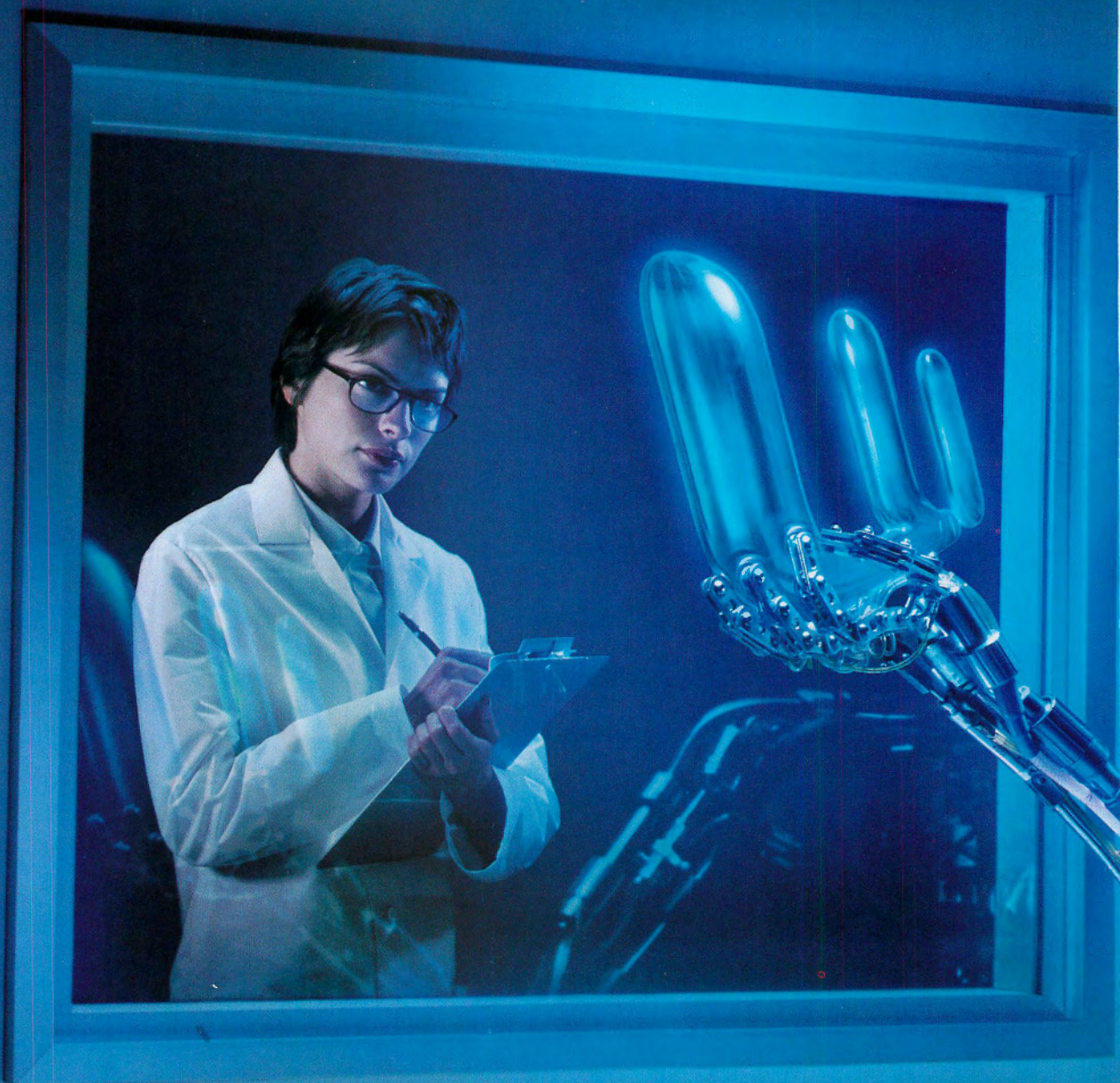


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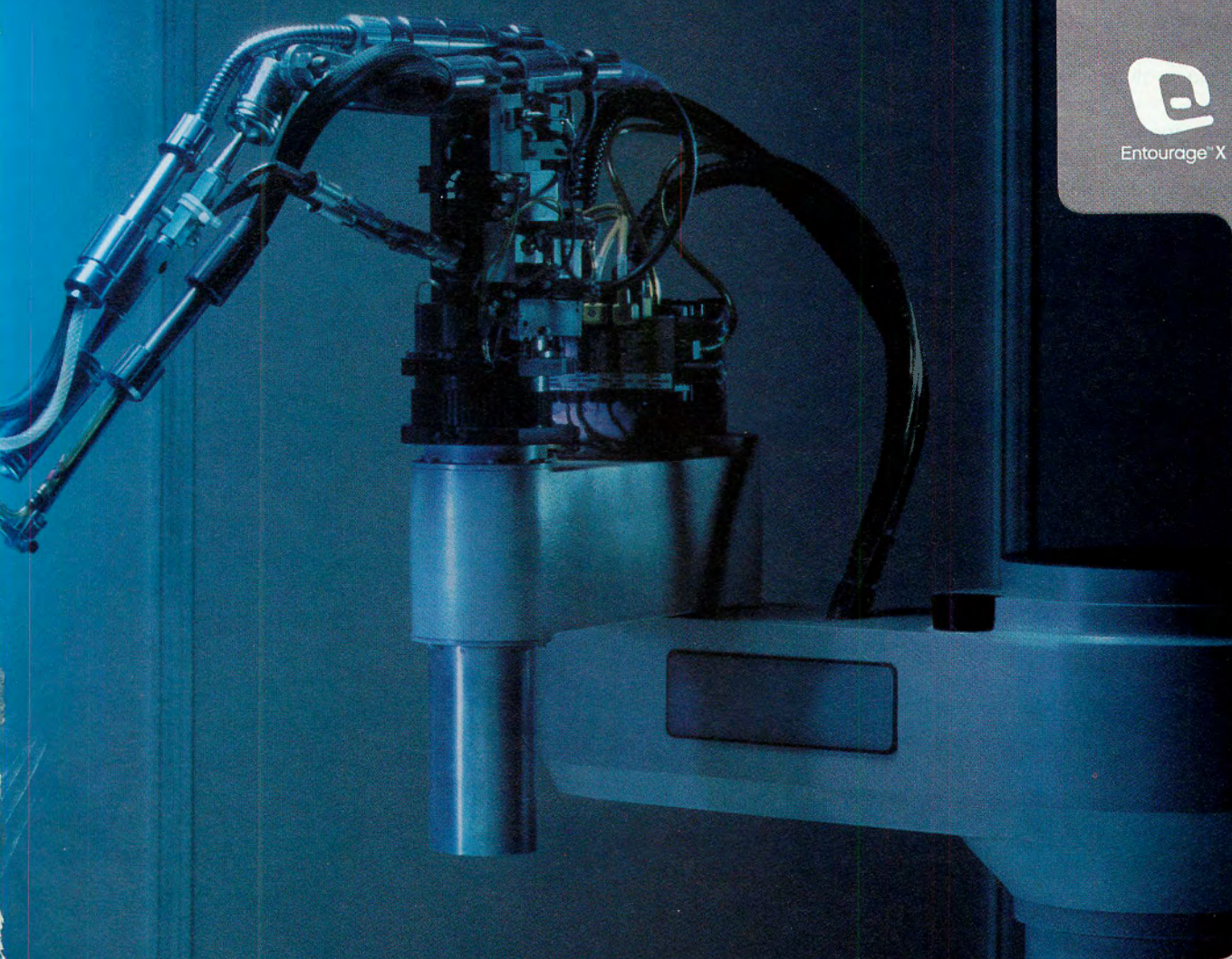
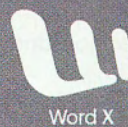
Apple Cinema HD Display, PowerBook G4 800MHz, Handspring Treo, GoLive 6.0, Retrospect 5.0, Return to Castle Wolfenstein, and more...



Microsoft®



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The robot arm, though, that's just for show.**



Introducing Microsoft® Word X, just part of the completely redesigned Office v. X for Mac. With the new Office, good looks are not deceiving. Go ahead. Ogle over the luscious Aqua interface. But that's just icing. Inside it's filled with Mac-only features. Tools to simplify everything. Formatting Palettes. Project Manager. And in Word, Multi-selection to make formatting a snap, and Web Page Authoring to easily put your work on the Internet. It's not just form. It's function. microsoft.com/mac

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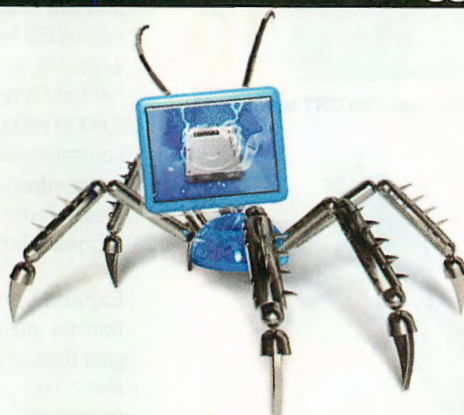
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FEATURES

COVER STORY



50 Biggest Mac OS X Bugs

Using Mac OS X can be a crapshoot. One moment you're admiring the lovely translucent effects; the next, your kernel is panicking. Worry no longer. We root out 50 of Mac OS X's most annoying bugs—and annihilate 'em all.

by Todd Stauffer

16

30 Skywalker Sounds

We could have done without the cheesy dialogue in *Star Wars: Episode II—Attack of the Clones*, but the sound effects were waaaaay cool. Find out just how integral the Mac was to the process of making the sounds of *Star Wars* come alive.

by Kris Fong



"Mine's bigger than yours!" "Yeah? Well, yours is pink, punk!"

HOW TO

56 Ask Us

You ask; we answer. Find out how to get music from your iPod to your Mac, rearrange Mac OS X menu bar icons, dismiss military time, control AirPort with Ethernet, and change Mac OS X defaults. by Buz Zoller

58 Create Pro Transitions in iMovie

Guilty of gratuitous transitions in iMovie? No wonder your friends flee at the mere mention of your next screening. Get a clue. We show you how to use iMovie transitions tastefully and effectively. by Andrew Tokuda



Goodnight room. Goodnight moon. And goodnight analog video editing.

62 Install Mac OS X on Unsupported Macs

If you're the proud owner of a Power Mac or PowerBook a little too long in the tooth to share in all the Mac OS X merriment, don't despair. Though Apple doesn't encourage it, you *can* install Mac OS X on a few unsupported Macs with a key piece of software and a little know-how. by Owen W. Linzmayer



Despite what Count Dooku thinks, clones can be tamed.

64 Set Up Unique Email Sender Alerts

We love hearing the email alert sound, but we hate dropping everything, only to discover that the incoming message is nothing but spam. Find out how to create a pseudo Caller ID system to tell you when an email is from someone important. by Jason Whong



After retiring from the bigs, the aging righthander hurled for the Mailman's League.

66 Make Money from Your Web Site

The dot-com dream may be dot-gone, but that doesn't mean you can't make money from the Web. We tell you how to generate beer money just by pasting extra code into your HTML. And if you've got stuff to sell, you can set up an online store with our help. by Gary Marshall and Kris Fong

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ISSUE 8

ON THE COVER
Illustration by Oliver Wolfson
photograph by Mark Madeo

EVERY MONTH

08 Editors' Note

That Dodge slogan, "In a perfect world, everything would be different," may be borderline dumb-ass—but if it's true, the big changes in this month's *MacAddict* are pushing the world rapidly toward perfection.

10 Get Info

What's new? Lots. We have the inside scoop on Jaguar (the next rev of Mac OS X), the Xserve (Apple's new server hardware), and the eMacs. Also find out the Mac game news from this year's Entertainment Expo (aka E3); who won Apple's design awards; how CD-Rs and CD-RWs differ; and why Cable Turtles, Cable Snakes, Hand-ez, and Cord Organix can improve your life.

37 Reviews

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- 49 **Vue d'Esprit 4** 3D landscape-creation software

55 The Hot List

Shopping for something we're not reviewing in this issue? Check out this list of selected top-rated stuff from the past six months.

94 Log Out

94 Letters
We freed our mascot, Max, from his duties as reviews-rating spokesmodel. His new job? Responding to you. Also this month: Our mad Scottish scientist Angus Pàidean strikes back.

95 Win a Star Wars Lightsaber
To celebrate Aspyr Media's upcoming release of *Star Wars Jedi Knight II: Jedi Outcast*, we're giving away a genuine Jedi lightsaber. All you need to do is correctly answer four fanatic-level *Star Wars* trivia questions and write Jar Jar Binks's obituary.


96 Shut Down
We introduced you to our new logo in our June issue. This month, we show you some other designs we considered before settling on our lovely, crisp, fetching new version.



10
What now? The CRT isn't dead?



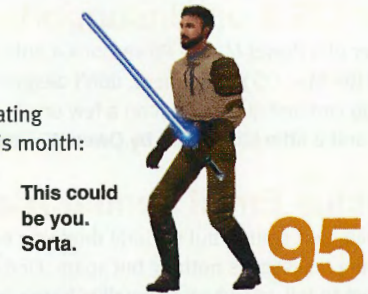
40
It's a magnet! It's a lighter!
It's a topless USB drive!



38
Now with audio-in, the PowerBook is perfect.



43
Is there such a thing as button overload?



95
This could be you. Sorta.



94
MAX
IS BACK!

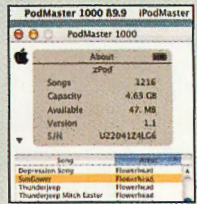
QUICKIES

Instant tips from this month's issue.

Save files from frozen Apps. If you can't force-quit a frozen app in OS X, and you have a newer Apple USB Pro keyboard, press Control-Command-Eject to restart or Control-Command-Option-Eject to shut down—these commands attempt to save files before shutting down. From "50 Biggest Mac OS X Bugs," p16.



Expand your iPod's powers. Want to transfer music from your iPod to your Mac? Use Podmaster 1000—but remember to obey Steve's First Law: Don't steal music. From *Ask Us*, p56.



Attract more Web traffic. Want to drive more traffic to your Web site? Join a banner network, such as ValueClick, that will cross-promote your page on other sites with similar types of visitors. From "How to Make Money from Your Web Site," p66.



Don't drive under the influence. Don't jump right into your SUV and take on city traffic immediately after playing 4x4 Evolution 2. Go for a walk first and get your bearings. From *Reviews*, p47.



Kill Nazis safely. Return to Castle Wolfenstein has an in-game save feature so you don't have to finish a level before saving your progress. Use it. From *Reviews*, p42.



Give yourself room to burn. If you get an error message when burning a disc (usually Error -36), you may have run out of disk space while burning. Try deleting some files from your hard disk, then burn again. From "50 Biggest Mac OS X Bugs," p16.



Dear Burglar,


The key is under
the mat. Beer and
sandwiches are
in the fridge.

♥ Greg & Patty

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THE DISC

Skywalker Sounds

In this exclusive video interview, we invade George Lucas's legendary Skywalker Ranch and talk with Matthew Wood, supervising sound editor for *Star Wars: Episode II—Attack of the Clones*, about how Macs played a key role in all aspects of the blockbuster's awesome soundtrack.



He may look harmless, but Matthew Wood has blown up entire planets.

Adobe Illustrator 10 Tryout

One of the most popular illustration packages, Adobe Illustrator is the industry-standard vector-graphics software for the Mac—and for good reason. With its full line of tools, you don't need to be a great illustrator to create amazing pro-level graphics for print publication or the Web. Try it free for 30 days, and see if you agree.



Show your true colors with Adobe Illustrator 10—even if they are slightly warped.

Dock Lawn

Dock Lawn allows you to swap out the Mac OS X Dock for a nice refreshing patch of green grass, perfect for summer. It instantly transforms your OS X icons into pseudo lawn ornaments, complete with garden gnomes.



The best thing about Dock Lawn? No mowing or fertilizing required.

Vue d'Esprit 4 Demo

Long a staple on the Windows side, Vue d'Esprit now gives Mac addicts another powerful 3D landscape-generating tool. Create natural scenery with realistic, professional-grade vegetation effects and high-quality rendering—everything from lush, tropical rainforests to surrealistic planetary wastelands.



Vue d'Esprit 4 puts tons of landscape-creation power in your hands. Use it with care.

16 Mac OS X Bug-Killing Utilities

In this month's "50 Biggest Mac OS X Bugs" (p16), we tell you how to annihilate—you guessed it—50 Mac OS X bugs. On this month's Disc, we give you all the tools you need to become a ruthless exterminator.

BrickHouse 1.1 beta 6
DAVE 3.1.1 demo
Default Folder 3.1.3
Firewalk X 2.1.1
Font Reserve 3.0 trial
FontDoctor X 5.1 demo
MacJanitor 1.2
NetBarrier X demo
OmniDiskSweeper 1.3
Pacifist 1.0 beta 4.1

PocketBackup 1.1
Super Get Info 1.0.7 demo
Synchronize Pro X 1.2 demo
Synchronize Plus X demo
TinkerTool 2.11
USB Overdrive X beta 4

A TOTAL OF 69 APPS!

Audio and music software; development and interface tools; games, graphics, and multimedia software; Internet, communication, and other utilities; plus productivity apps

If you don't receive the Disc with your copy of MacAddict, you might want to consider upgrading! Each monthly Disc contains cool demos, useful shareware and freeware, and the inimitable MacAddict Staff Video. To get 12 issues of MacAddict that include this value-packed Disc with your subscription (prorated if necessary) for just \$10 more, call 888-771-6222—the operator will take care of everything.

MacAddict

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Under a Dollar

In magazine language, it's called a redesign. In your language, it might be called, "What the...?!" The copy of *MacAddict* you now hold in your hands is different from the past issues on your shelf. And it's better at helping you get the most out of your Mac and have a hell of a good time doing so.

But we're still *MacAddict*, still a good-looking good read with buckets of attitude. To help on that last point, we've promoted Max from his former position as pasty-faced *Reviews* mascot to editor of his own section, *Log Out* (see p94). He'll answer your letters, manage our contests, dole out prizes, and indulge in all-purpose smart-assitude.

We're keeping the zero-widget rating under wraps, ready and waiting to search and destroy when needed.

Now that we've liberated Max, we've also upgraded our ratings system to six levels, represented by a row of OS X-ey widgets. In descending order, they're *Awesome*, *Great*, *Solid*, *So-So*, and *Lousy*. Yeah, I know that's only five—for now, we're keeping the zero-

widget rating under wraps, ready and waiting to search and destroy when needed.

Another hot new addition—called, appropriately enough, *The Hot List* (see p55)—offers a selection of products that earned our top ratings over the past six months. Now you'll always know the best swag to grace your system. Happy shopping!

We've also added a separate *Editors' Choice* award. While our review ratings are objective judgments based strictly on a product's quality and performance, we'll give an *Editors' Choice* to stuff we'd actually buy ourselves with our own hard-earned cash. It's our personal stamp of approval—and lust.

Some parts of the book have moved around as well. *Scrapbook*—our visual "How the %\$#@! does this thing work?" section—and our games coverage in *Powerplay* are no longer off on their own, cold and lonely; they're now part of the greater *Get Info* news-and-other-cool-stuff family. *Ask Us* is now part of our how-to section's new opening pages, and the *Disc Page* is part of our table of contents—the Disc is such an important part of *MacAddict* that it deserves treatment equal to that of our features, how-to stories, reviews, and so on.



Thanks to art director Chris Imlay, Rik's lack of personal taste didn't derail *MacAddict*'s redesign.

And it's all wrapped up in new colors and fonts chosen by our redoubtable art director, the supremely sophisticated and perspicacious Christopher Sterling Imlay.

Let all of us—including Max—know what you think at letters@macaddict.com. We hope you'll agree that change is not only a good thing, it's anything under a dollar.
—Rik Myslewski

STAFF RANTS

Q1: What's the best part of *MacAddict*'s new look?
Q2: What else would you want to redesign?

Jenifer Morgan
Irrational Rationalist
What's the best part of *MacAddict*'s new look?
Its cleanliness. It's now so squeaky clean I could eat my dinner off its pages.
What else would you want to redesign?
Motel 6 decor—from bedspread to Bible.



Cathy Lu
Executive Bug-Squasher
What's the best part of *MacAddict*'s new look?
The new and elegant Max. I like it that he finally has the courage to stick up fingers other than his thumb.
What else would you want to redesign?
The lottery. I would design it so that only I can win, and win 100 percent of the time.



Narasu Rebbapragada
Director of Intelligence
What's the best part of *MacAddict*'s new look?
The new *Reviews* rating system is brutally honest and entertaining ...like Denis Leary.
What else would you want to redesign?
I would redesign late-night TV to have more Denis Leary.



Niko Coucouvanis
Fat Checker
What's the best part of *MacAddict*'s new look?
That'd be the new five-widget review scale. And of course Max's new digs—dude be wearing pants, for chrissakes!
What else would you want to redesign?
I'd start with gravity, then get busy on that whole socioeconomic stratification thing.



Kris Fong
Query Queen, Ruler of Planet TKTK
What's the best part of *MacAddict*'s new look?
That after all these years, Max finally gets more face time and can speak his mind—now we don't have to endure his incessant whining every day.
What else would you want to redesign?
Those Crest Spin toothbrushes. Will someone please tell me how to stop toothpaste from spurting out the back of the damn thing? My bathroom mirror's beginning to resemble a Pollock painting!



Chris Imlay
Aestheditor-in-Chief
What's the best part of *MacAddict*'s new look?
At this point, my favorite part of the new look is the big numbers in the how-to section. Actually, I wish they were even bigger. I love big numbers. No, really!
What else would you want to redesign?
I think *NSYNC is due for a redesign. Or perhaps the human foot. I'd really like to redesign Ronald McDonald, making him a 50-foot Japanese monster robot who shoots the Fry-Guys out of his fingers.



Leslie Brown
Soon-to-Not-Be-A Bachelorette
What's your favorite part of *MacAddict*'s new look?
The sublime divinity of the Swiss typeface in 100 cyan, 40 magenta, and 10 black. Ahhhh.
What else would you want to redesign?
Maybe I've been taking too many cross-country flights this year, but those airplane bathrooms have got to go.



Max
Chief Morale Officer
What's the best part of *MacAddict*'s new look?
It's a tossup between escaping from that freakin' little circle and getting some freakin' clothes to wear. Five and a half years of humiliation are finally over.
What else would you want to redesign?
My face. You try living with only four expressions! Then I'll put a membership in the Hair Club for Men on my expense report.





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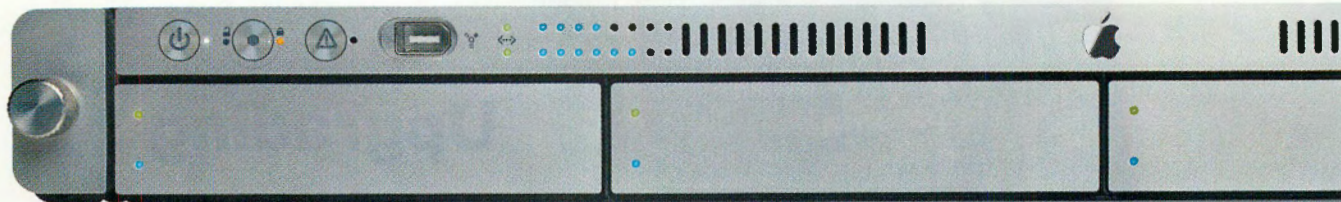
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Apple Woos Key Markets

Apple sure is being friendly these days. Since January's Mac Expo 2002, Apple has unveiled products for three key computing markets: development, enterprise, and education. Apple's push to expand isn't surprising, since about a year ago, the company vowed to increase its 5 percent share of the overall computer market.

Here's what it's doing right and what it still needs to accomplish.

WINING AND DINING DEVELOPERS

At Apple's annual Worldwide Developers Conference, Steve Jobs unveiled Jaguar, the code name for the next version of Mac OS X, and challenged developers to build great apps in Mac OS X. To sweeten the deal, Apple updated Mac OS X's suite of development tools with the latest Unix tools, such as FreeBSD version 4.4, the new GCC 3 compiler, and IPv6 and IPSec. Jobs also announced features that would integrate Apple into the Windows world, including Server Messaging Block (SMB) browsing and sharing, built-in PPTP VPN security, and better support for the Microsoft Exchange server.

Overall, developers were impressed with what Apple had to show. Matt Henderson, technical lead for CodeWarrior Mac OS tools, found Jaguar's new HI (Human Interface) toolbox and Quartz Extreme (Apple's new technology for hardware graphics acceleration) particularly impressive. However, only Macs equipped with at least an AGP 2X video card and 32MB of VRAM will be able to take full advantage of Quartz Extreme.

While Jaguar enticed the faithful, the question remains whether it will attract new developers to the Mac. Henderson says the bottom-line requirement for getting more developers to the Mac is generating more end users. "Developers are the equivalent of lions," he says. "There have to be a lot more zebras."

To Win Over Developers

WHAT APPLE'S DOING RIGHT: Creating robust Unix dev tools

WHAT APPLE STILL NEEDS TO DO: Attract more end users

COURTING BIG BUSINESS

Big biz is waking up to the Mac. Hewlett-Packard, Sybase, and Oracle announced plans to make their server and database-

management software compatible with Mac OS X in 2002. The reason is the Xserve, Apple's first dedicated server hardware since it discontinued the AIX-based Network Server in 1997.

The slim, silver, rack-mounted server is Apple's fastest piece of hardware to date and comes in two highly customizable configurations. The \$2,999 model features one 1GHz G4 processor, 256MB of RAM, and one 60GB hard drive. The \$3,999 model has two 1GHz processors, 512MB of RAM, and one 60GB hard drive. Both options have a 256K L2 cache and a 2MB DDR L3 cache; capacity for 2GB of DDR SDRAM; two Gigabit Ethernet ports; two 64-bit, 66MHz PCI slots; FireWire; USB; CD-ROM; and four hot-pluggable ATA/100

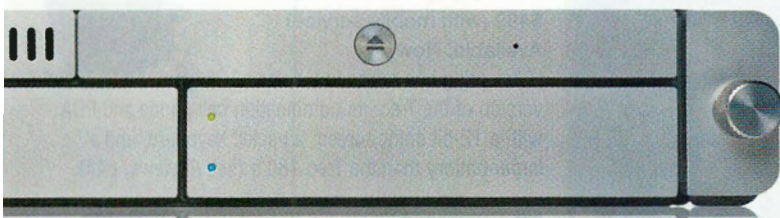
drive bays. This is the first time Apple has implemented DDR SDRAM and ATA/100 hard drives.

"It is clearly an entry for Apple into the more classic enterprise space," says Tom Traubitz, senior marketing manager for Adaptive Server Enterprise at Sybase. He says Apple has addressed market pressure to design systems that don't demand as much skilled IT labor. Apple's Xserve hardware slides out of its casing for easy self-service. Plus, the Mac OS X Server software comes with an application called Server Monitor for remotely monitoring each server's drives, temperature, fans, power supplies, and Ethernet status.

To succeed, however, the Xserve must stay competitive in performance and price (it helps that Apple offers free unlimited



Will Apple's all-in-one eMac lure educators away from the PC?



Apple's server hardware (above) stacks 42 units tall for 20 terabytes of storage.

client licenses). Apple will also have to keep its focus on markets like video and education, for which the Xserve makes sense. Despite ad hoc comparisons to Sun and IBM servers, industry analysts don't perceive Apple as a competitor in the large-scale enterprise-server market. Charles Smulders, vice president of hardware platforms for Gartner, sees the Xserve as a missing piece of Apple's portfolio rather than a competitive product on its own. "[Xserve] will protect some of their installed base where their customers are looking for servers as well as a desktop product."

To Win Over the Enterprise Market

WHAT APPLE'S DOING

RIGHT: The Xserve

WHAT APPLE STILL NEEDS

TO DO: Stay competitive in price and speed

ENTICING EDUCATORS

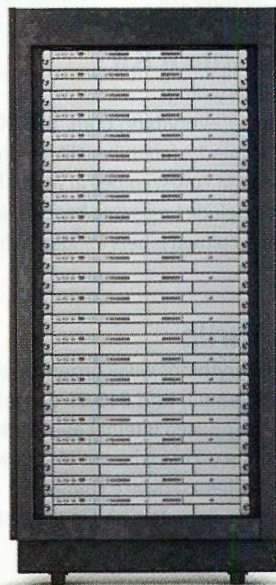
Apple recently released new hardware and software for education—then quickly made the hardware available to consumers. The eMac—an all-in-one 700MHz G4 iMac with a 17-inch flat CRT display—

comes with either a CD-ROM or a Combo CD-RW/DVD-ROM drive (CD-RW only for consumers), 10/100Base-T Ethernet, optional AirPort, an nVidia GeForce2 MX with 32MB of DDR RAM, two FireWire ports, five USB ports (including keyboard ports), an audio-input minijack, and a mini-VGA output port. Although the eMac is base-priced at \$1,099 for consumers, educators enjoy even lower prices.

Back in March, Apple also released its Apple Remote Desktop software for Mac OS X, an application for remotely managing classroom Macs from a network.

Despite Apple's efforts, some school districts are still turning to PCs for the cheaper initial purchase price. Also, many educators believe kids are more likely to use PCs after they graduate.

In waging the Mac versus PC war, Apple may have one underutilized weapon: community advocates. At least that's the opinion of John Droz Jr., a retired computer consultant whose battle to keep Macs in North Carolina's Carteret County school district caught the attention of *BusinessWeek*.



"It's too bad that Apple can't work out better ways to work with enthusiastic supporters rather than taking an arm's-length attitude," he says. Droz says Apple failed to win over his school district because it chose to work solely with school officials, who were stubbornly PC centric, rather than use community support of Macs. Droz has outlined on his Web site the reasons why schools are better off with Macs (http://homepage.mac.com/mac_vs_pc/Intro.html).
—Narasu Rebbapragada

To Win Over Educators

WHAT APPLE'S DOING RIGHT:

Aggressive education pricing

WHAT APPLE STILL NEEDS TO

DO: Work with community Mac advocates

NEWSNOOK

Adobe Commits to OpenType

Graphics giant Adobe Systems has converted 650 Adobe Type Library fonts from the PostScript format to OpenType, a new cross-platform standard that combines the screen and printer versions of fonts into one simply named file. The good news is that OpenType fonts have extra characters (such as the euro symbol) and ligatures. The bad news is that even if you already have a PostScript font, you'll have to pay for the OpenType version (see www.adobe.com/type for pricing info). Adobe says it will phase out PostScript fonts in a few years.

Eight Isn't Enough

RealVideo is hardly a favorite among Mac users, but it's almost impossible to avoid. RealNetworks has released RealVideo 9, which according to the company streams video using 30 percent less bandwidth than RealVideo 8. RealNetworks also released RealAudioSurround for multichannel surround sound. RealPlayer 8 on the Mac will play RealVideo 9 media.

Break Out The Breakout

Have you played iPod's Breakout game? (If not, go to Settings, choose Legal, choose About Apple, and then hold down the center button and wait.) This past spring, Apple Student Developers (www.applestudentdevelopers.org) hosted the ASD iPod Breakout Contest. First-place winner King Cobra earned a score of 1653; second-place winner Bob Maher earned 1505; and third-place winner Zachary Linhart earned 1366. They won \$30, \$10, and \$5 gift certificates, respectively, to Amazon.com.

Graphics Wars

Adobe and Macromedia are still embroiled in legal warfare. About two years ago, Adobe filed a lawsuit alleging that Macromedia infringed Adobe's patent for the tabbed palette. This May, a jury awarded Adobe \$2,822,280 in damages. However, Macromedia won a countersuit against Adobe for infringing Macromedia patents for blended elements and for displaying and editing sound waveforms. Macromedia received a damage award of \$4.9 million. Both parties are appealing the decisions. Big surprise.

STOP CORD CHAOS

Nifty gizmos organize unwieldy wires

The frenzy of cords and wires at the back can ruin the aesthetics of your sleek, stylish Mac. These six options for getting the mess under control are available right now.—*Carrie Shepherd*

APC Cord-It Cable System

American Power Conversion, www.apc.com, \$9.99 for one medium and one large

The Cord-It acts as a spool to tame the sloppy excess cords that tangle feet and trap dust bunnies. Light and palm-size, it takes up minimal space near your desk or in a laptop case.



Cord-It brings style to clumps of wire.



Less than \$20 takes you from Oscar Madison to Felix Unger.

Cord Control Kit

Organize Everything, www.organize-everything.com, \$16.99

The slim, flexible 12-foot tube, slit lengthwise to encompass your cords, comes in white, black, or gray. The kit includes reusable beaded ties for bundling and colored labels for identifying cords and jacks.



Helpful turtles reel in excess.

Cable Turtle

Organize Everything, www.organize-everything.com, \$6.99 (small) and \$13.99 (large)

Even in the fast-paced Internet age, turtles have value, spooling excess wire out of your way. This small, yo-yo-shaped device comes in 2 1/2-inch and 3 1/2-inch diameters and in gray, black, blue, and red.



This is one snake that's welcome.

Cable Snake

Wrasse, www.wrasse.com, \$12.95 (3-foot) and \$23.95 (6-foot)

Made of the same stuff as a typical backpack, the Cable Snake encases cables and wires. It comes in red, black, beige, dark green, and regatta (blue) and can be silk-screened with a company logo.



Hand-ez wrappers add homespun style to your office.

Hand-ez

Products with Purpose, www.galaxymall.com/household/baghandles/cords.html, \$2.99 (denim) and \$3.49 (faux leather)

Hand-ez wrappers are padded fabric rectangles that wrap around cables to keep them tidy. You could use twist ties, but these nifty wrappers show more style. You can also personalize them with a name or logo.



Plastic doodads to the rescue.

Cord Organix

Novoflex Marketing Private Limited, www.cordorganix.com, \$19.95

This small kit includes everything you need to tame that tangle: cable hanger clips and adjustable clamps with adhesive backing, straps and beaded wrap to bundle wires, spacer clips to keep a safe distance between cords, and label stickers.

NEWSTUFF

Treo 270

Handspring, www.handspring.com, \$499 (with mobile service)

Available: Now

Handspring has released a color version of the Treo, its combination cell phone and PDA, with a 12-bit color screen, a backlit keyboard, and a larger battery than the Treo 180's (see *Reviews*, p44).



Treo 90

Handspring, www.handspring.com, \$299

Available: Now

For those who want the PDA and keyboard without the cell phone, Handspring offers up the petite Treo 90 with a 12-bit color screen, a QWERTY keyboard, 16MB of RAM, and an SD (Secure Digital) memory slot.



Office v. X Service Release 1

Microsoft, www.microsoft.com/mac, free

Available: Now

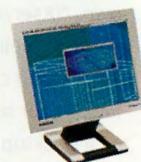
This Office update contains more than 1,500 performance enhancements and bug fixes—including Quartz text smoothing and better printing. Microsoft promises better vertical scrolling and table performance in Word, support for Open Database Connectivity (ODBC) in Excel, and better picture caching and faster transparency effects in PowerPoint. Also, Entourage's maximum database size increases to 4GB.

SyncMaster 152T

Samsung, www.samsungusa.com, \$549

Available: Now

This 15-inch LCD has a 140-degree horizontal (120-degree vertical) viewing angle and a 1,024-by-768-pixel resolution at 75Hz.



SyncMaster 763mb

Samsung, www.samsungusa.com, \$249

Available: Now

This 17-inch CRT features three brightness settings that Samsung claims are optimized, respectively, for viewing text, motion graphics (such as DVD and TV signals), and Web pages. Its maximum resolution is 1,280 by 1,024 pixels at 85Hz.



C-720 Ultra zoom

Olympus, www.olympus.com, \$599

Available: Now

This 3-megapixel digital camera offers an 8x optical zoom, a fast 1/1,000th of a second shutter speed, and a user-configurable mode for saving settings.

DROOLWORTHY

Sexy Stuff We Can't Wait to Get Our Mitts On

Pantone Color Cue

Pantone www.pantone.com \$349

Amaze your design cronies by magically, mystically rattling off the exact Pantone color equivalent of that poster on the wall. Little do they know you've been using the Pantone Color Cue, a flashlight-size device that can scan a color on a flat surface and figure out the closest match in the Pantone Matching System, the industry standard for spot color.—NR



The vibes coming off your desk
are so Pantone 555.

PHOTOGRAPH COURTESY PANTONE



Storage so sexy we're
considering leaving
our spouses.

PHOTOGRAPH COURTESY SONY

Micro Vault

Sony www.sonystyle.com \$49.99 to \$299.99

Bring color back to the Mac with Sony's USB storage-media gizmo. The Micro Vault is color coded for storage capacity—orange for 16MB, red for 32MB, blue for 64MB, and black for 128MB—and you can create a password-protected area on the drive. Look for 256MB and 512MB sizes by the end of 2002.—NR



THE BEST OF X

Winners of the 2002 Apple Design Awards

Apple's seventh annual Apple Design Awards highlighted the best applications for Mac OS X.

BEST NEW MAC OS X
PRODUCT

Toon Boom Studio 1.1
(Toon Boom, www.toonboomstudio.com, \$374)
For 2D and 3D animation

MOST INNOVATIVE MAC
OS X PRODUCT

Watson 1.5
(Karelia Software, www.karelia.com, \$29)
For intelligently searching the Internet

BEST MAC OS X USER EXPERIENCE

OmniGraffle 2.0
(Omni Development, www.omnigroup.com, \$59.95)
For creating charts and diagrams

BEST MAC OS X TECHNOLOGY ADOPTION

OmniGraffle 2.0
(Omni Development, www.omnigroup.com, \$59.95)
For creating charts and diagrams

BEST MAC OS X OPEN SOURCE PORT

TeXShop 1.19
(Richard Koch, www.uoregon.edu/~koch/texshop/texshop.html, free)
For formatting scientific and technical documents

BEST MAC OS X STUDENT PROJECT

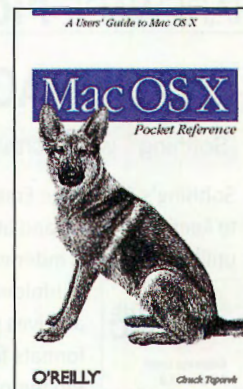
MacJournal 2.1
(Dan Schimpf, <http://homepage.mac.com/dschimpf>, free)
For organizing logs, diaries, journals, notes, and ideas

POCKET DRIVE

Mac OS X Pocket Reference
takes learning on the road

If the perils and pitfalls of Mac OS X accost you at home, at work, and in between, you need Chuck Toporek's *Mac OS X Pocket Reference* (O'Reilly, www.oreilly.com, \$12.95). This handy guide puts hundreds of Mac OS X tips, hints, and explanations in a compact 4.25-by-7-inch format. The book opens with differences between Mac OS 9 and OS X and continues with the basics of Mac OS X (such as the Dock, the Finder, and users). It then steps up the pace with a rundown of developer tools and Mac OS X Unix commands, and finally goes through system configurations, maintenance, and troubleshooting. From lists of keyboard shortcuts to Unix commands, there's something for every Mac OS X user in this book. Buy it.—NR

This compact Mac OS X
reference guide fits in your
back pocket.



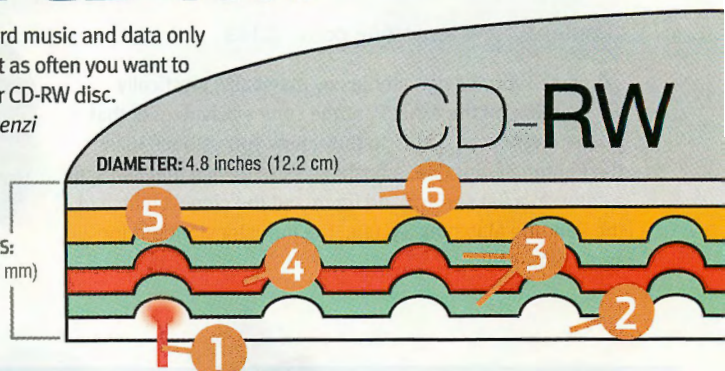
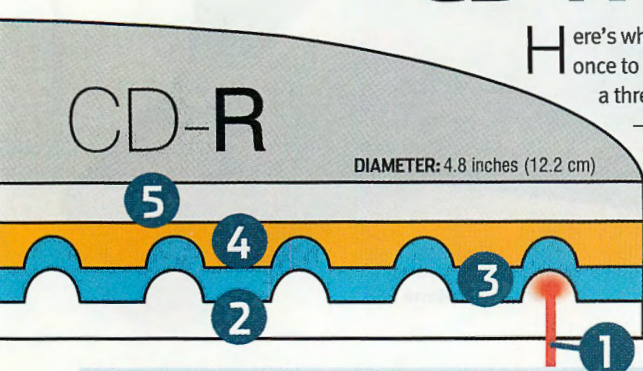
SHOWINFO

Learn what's on the inside

CD-R VS. CD-RW

Here's why you can record music and data only once to a CD-R disc but as often you want to a three-times-pricier CD-RW disc.

—Keelin Devincenzi



1 LASER Heated to approximately 250 degrees Celsius, your CD-R drive's laser can write data. Heated to between 5 and 40 degrees Celsius, it can read data.

2 POLYCARBONATE SUBSTRATE Most of the CD-R is composed of a polycarbonate substrate, textured with a microscopic spiral tract 0.6 microns wide, that guides the laser during the burning process. The laser (above) follows the spiral to read and write the data from the center of the disc to the outer rim.

3 RECORDING DYE LAYER Your CD-R stores recording information in a dye layer. Based on the digital information it receives, the laser burns bubbles, which become opaque when cooled, into the dye layer. The changes to the dye layer are permanent, making CD-R a write-once media.

4 REFLECTIVE LAYER Your CD-R drive reads a disc based on whether its laser reflects back from the reflective layer, usually comprised of gold or aluminum. Untouched areas of the CD-R allow the laser to reflect back, while bubbled areas don't allow reflection. Your CD-R drive translates this information into a series of 1s and 0s.

5 PROTECTIVE LAYER A top layer of acrylic protects the recording and reflective layers and allows manufacturers to stamp their logos on the product.

1 LASER Your CD-RW drive can write at approximately 500 to 700 degrees Celsius and erase at approximately 200 degrees Celsius.

2 POLYCARBONATE SUBSTRATE The CD-RW's polycarbonate substrate is almost identical to the CD-R's (left).

3 DIELECTRIC LAYERS These layers draw excess heat from the recording layer during the writing process, which takes place at 500 to 700 degrees Celsius (932 to 1,292 degrees Fahrenheit), so that the recording layer does not overheat.

4 RECORDING LAYER The CD-RW's recording layer consists of a metal alloy that changes physical states when heated and cooled. It begins in a crystalline state, but during recording, areas where the laser burns at 500 to 700 degrees Celsius change from a crystalline to an amorphous state. This layer also makes the disc rewritable. To rewrite a disc, a CD-RW drive reheats the disc to 200 degrees Celsius (392 degrees Fahrenheit) to become crystalline again.

5 REFLECTIVE LAYER This layer serves the same purpose as the reflective layer in a CD-R (left). In the CD-RW, however, the crystalline areas in the recording layer allow the laser to reflect back, while the amorphous areas do not allow reflection.

6 PROTECTIVE LAYER As with the CD-R (left), this top layer of acrylic protects the recording and reflective layers.

SHAREWARE PICK OF THE MONTH

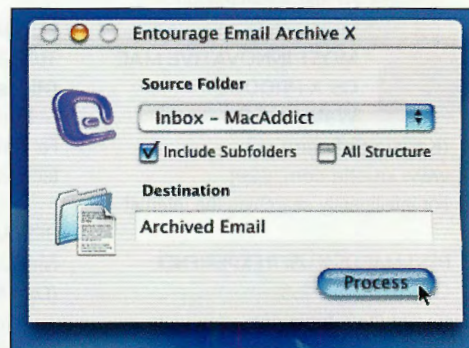
ENTOURAGE EMAIL ARCHIVE X

Softhing www.softhing.com \$20

Softhing's Entourage Email Archive X is a blessing for Microsoft Entourage X users who need to keep their email and attachments but are sick of bloated mailboxes. This one-window utility, which runs independently of Entourage, locates Entourage's email folders and



subfolders, lets you choose a destination for your stored email, and then archives your messages. You can create archives in text or tab-delimited formats for viewing in a spreadsheet or database program. A free FileMaker Pro template (not the application itself) is included.—Andrew Tokuda



Entourage Email Archive X is a must for email pack rats.

THE GAMES GO ON

Good Tidings from E3

The annual Electronic Entertainment Expo, or E3 for short, is all about one thing: video games. While console systems ruled the show, which took place in Los Angeles, there were a few treats for Mac gamers.

NEW PORTS

The ship has come in for Mac gamers as developers port the best PC games over to our side.

Aspyr (www.aspyr.com) announced that this summer it would release LucasArts' (www.lucasarts.com) *Star Wars Jedi Knight II: Jedi Outcast*, a 3D action-adventure game, where you save the galaxy by using a mix of weapons, Force powers, and a lightsaber (score!) while visiting various *Star Wars* locales, including Cloud City and the Jedi Academy on Yavin 4.



Coming soon to the Mac: Tom Clancy's Ghost Recon games.

Aspyr is also working on Tom Clancy's Ghost Recon and its bundled mission pack, Desert Siege, due out this fall. Ghost Recon is a squad-based action game, where the Ghosts (an elite team of Green Berets) try to keep Russia from rebuilding the Iron Curtain. In Desert Siege, it's off to

Africa to settle a long-running war between Ethiopia and Eritrea. Finally, Aspyr will release The Sims Vacation Expansion Pack this summer.

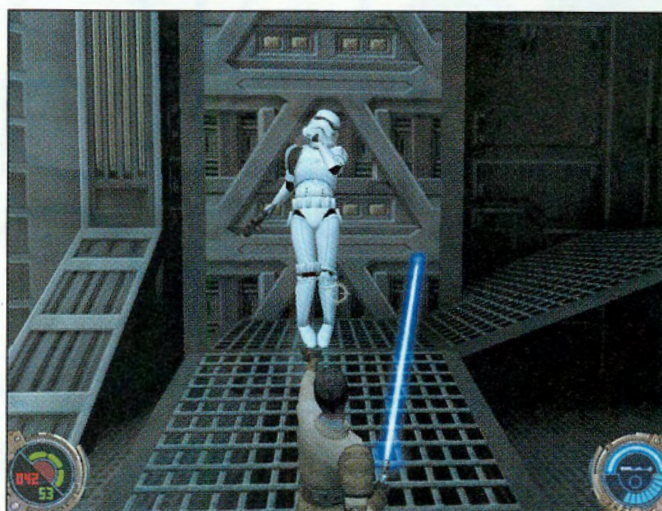
Not to be outdone on the battlefield, MacPlay (www.macplay.com) signed a three-game deal with Crave Entertainment (www.cravegames.com). The first release will be Freedom Force, a role-playing and action game in which you assemble, train, and deploy a group of superheroes that battle villains, monsters, and other baddies. The other two Crave games are yet to be announced. MacPlay also nabbed the rights to Soldier of Fortune II, based on the infamous military enthusiast magazine. In this first-person shooter, you play a globe-trotting mercenary who uses military weapons to stop a bioterrorist organization. MacPlay is pushing to release Soldier of Fortune II this summer and Freedom Force in October.

GETTING CLOSER

We got a firsthand look at two previously announced Mac games, which should be out this summer.

Blizzard's (www.blizzard.com) Warcraft III wowed us with four different races: humans, orcs, night elves, and the undead. In this real-time strategy game with role-playing elements, a brand-new 3D engine lets you get in on the fighting. Plus, Blizzard tells us the game has a surprise ending.

Meanwhile, MacSoft is winding up its port of Max Payne (see *Powerplay*, Apr/02, p64 for the news). In this third-person, decimate-everything-in-sight game, Detective Payne avenges the death of his family



Jedi Knight II puts the Force in your hands.

by killing the m**f**s responsible. Check out the slow-mo Bullet Time mode for spectacular shooting.

TEASERS

While there's no definite word on when these jewels will get to the Mac, here's a taste of what we hope is our future.

id Software (www.idsoftware.com) impressed E3-goers with a 10-minute video of Doom III (rendered in real time by the game engine), John Carmack's first-person shooter, due out in 2003. There is no word yet on who will publish the Mac version of the game.

Infogrames (www.infogrames.com), MacSoft's parent company, has acquired

developers Shiny Entertainment (www.shiny.com), creator of The Matrix Reloaded, and BioWare (www.bioware.com), best known for Baldur's Gate. While MacSoft hopes to license some of the acquired games, MacSoft product manager Al Schilling cautions that the news "doesn't necessarily mean there will be Matrix for the Mac."

Finally, Halo is still very much alive for the Mac, according to Peter Tamte, president of Destineer (www.destineerstudios.com), whose Bold label ports Microsoft games to the Mac. "It is absolutely coming out for the Macintosh and I believe that it will ship simultaneously with the PC ship date," says Tamte.

—Cathy Lu



The four races in Warcraft III shake things up in the world of Azeroth.

50 BIGGEST MacOSX BUGS



AND HOW TO KILL THEM



ON THE
DISC

Demos of Net Barrier X, Dave 3.1.1, Font Reserve 3.0, Super Get Info 1.0.7, FontDoctor X 5.1, Synchronize X Plus, and Synchronize Pro X; plus Firewalk X 2.1.1, USB Overdrive X beta 4, Pacifist 1.0b4.1, TinkerTool 2.11, MacJanitor 1.2, BrickHouse 1.1b6, PocketBackup 1.1, Default Folder X 3.1.3, and OmniDiskSweeper 1.3

by Todd Stauffer

illustrations by Oliver Wolfson • photograph by Mark Madeo

Let's face it: In Mac OS 9, you were king of the hill, master of your domain. When a problem arose, you usually knew what went wrong, how to fix it, and what to do to keep it from happening again. Mac OS X is a different beast.

For all but the truly geeky among us, OS X is foreign territory, and the spectrum of bugs and problems ranges from the somewhat familiar to the utterly insane. When something goes wrong in Mac OS X, bumping up memory allocation ain't going to fix what's ailing you. Last year, we gave you "50 Biggest Mac Problems (and How to Squash 'Em!)." In this year's Annual Troubleshooting Superguide, we're going (almost) exclusively Mac OS X with 50 all-new bugs we hope you'll never encounter. But we all know better than that.

Troubleshooting Caveats

A troubleshooting article, especially one about a fairly new operating system, necessitates a few cover-your-butts statements. First, we wrote our article based on Mac OS 10.1.4, the latest version at press time. Mac OS X is a moving target, and as Apple fixes some problems, it will also inadvertently introduce more—so problems and solutions may change over time. Also, troubleshooting is an inexact science—a particular fix may not work for you or your Mac model. For further help, keep an eye on the Mac Web community and Apple's constantly mutating support site (www.apple.com/support).

THE BIG UH-OHS

Kernel panics, flashing question marks, the scary dead Mac. These aren't your ordinary problems—these are the problems that make you reach for your heart pills. But before you decide that the only solution is a soothing cup of chamomile tea and a good cry, read on—there might be another answer.

1 Dead Mac

PROBLEM: My Mac won't start up. No lights. No startup sound. No nothing.

SOLUTION: Before you flip out, take a deep breath. Relax. Your problem may be a minor one. Or not.

First, check all of your plugs, power outlets, and power strips. Make sure your keyboard and mouse are plugged in, unplug all other peripherals (just in case a device is interfering with the startup signal), and try booting up using the power button on your Mac, not the one on your keyboard.

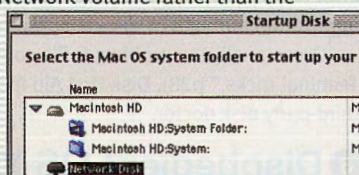
If you have a laptop, remove and reinstall the batteries and try again; if that's a no-go, reset the laptop's Power Manager (check your user's guide to find out how—practically every PowerBook does it differently). For desktop models, particularly Macs that are a few years old, suspect a bad PRAM battery—replace it (you can get one from an Apple service center) or have a pro do so. You can also take a stab at pressing the reset button on your motherboard (usually located next to the PRAM battery). If all else fails, it's off to an authorized Mac repair shop for you.

2 Flashing Question Mark

PROBLEM: All I see when I start up is a folder with a flashing question-mark icon alternating with a flashing Finder icon.

SOLUTION: A flashing question-mark icon means the Mac can't find a valid System Folder, Mac OS X or otherwise, from which to boot. You may have accidentally selected Network Volume rather than the startup disk in the Mac OS 9 Startup Disk control panel. If that's the case, chill out—the Mac should start up after a couple minutes.

If the Mac doesn't start up on its own, the quickest solution is to boot off a Mac OS 9 CD-ROM (or a recovery CD from Norton Utilities). To do



If you inadvertently select Network Disk, you'll have to wait a while before your Mac finds a real System Folder.

that, simply reset the Mac (see Problem 4, "Reset Your Mac," p18), insert the CD when you start up, and hold down the C key after hearing the startup tone. Keep holding it down until you see the "Welcome to Macintosh" screen. Once you've booted up, launch the Startup Disk control panel, select a valid system disk, and restart.

If you're still having trouble starting up—especially if you can't see the disk on the desktop when you start up using a CD—run Alsoft DiskWarrior (see "Troubleshooting Toolkit," p24) to see if it can rebuild the disk's directory. If that doesn't work, move on to Norton Utilities or TechTool Pro for disk doctoring and/or file recovery. Hopefully one of those tools will bring your System folder back from the dead. (You do have a good backup, right?)

3 Broken Startup Folder

PROBLEM: After I hear the startup tone, I see a broken-folder icon flashing.

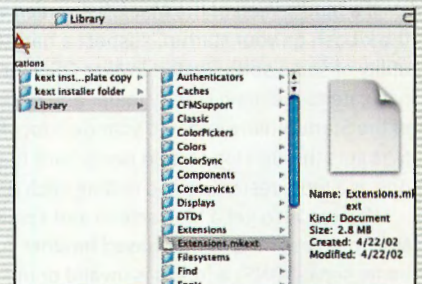
SOLUTION: A broken-folder icon probably stems from a corrupt or missing Mac OS X system component. It's possible that someone moved or messed up the Mach kernel files, which are usually invisible in Mac OS X but show up when you're running Mac OS 9.

The official (Apple-blessed) solution is to back up important files, reformat the disk, reinstall OS X from the CD, and finally initiate Software Update for a round of updates. (Didn't we read that *exact* procedure in a Windows handbook somewhere?)

The intrepid, however, can start up in Mac OS 9 and root around on the hard disk to see if the hidden files are missing (particularly the Mach files, but look for any evidence of System folder tampering). You could try copying missing files from



Mac OS 9 shows you the invisible—and essential—Mach files, which might be tempting Trash fodder for the uninitiated.



Trashing your Extensions.mkext file may repair that broken startup folder that's plaguing you. Or maybe not.

a system running the same OS X version, then restarting. Back up important files first. If you have a CD with *exactly the same* Mac OS X version as the one you're running, you can run the OS X Installer again to replace the files.

50 BIGGEST™

- If no system files are actually missing, delete the Extensions.mkext file from the Library folder in the System folder via Mac OS 9, then restart (don't worry, the file automatically regenerates). That procedure clears the extension cache, which is designed to shorten startup time but can sometimes get corrupted and cause trouble.

4 Reset Your Mac

PROBLEM: Help! My Mac has crashed, and I can't access the Restart or Shut Down commands.

SOLUTION: Sure, sure, sure—Mac OS X *never* freezes. Riiiiight.

If you can't force-quit the frozen application (Command-Option-Escape), you'll have to reset your Mac. For a soft reset, press Control-Command and the power key, if your Mac has one on the keyboard or if you have a laptop. On newer Apple USB Pro keyboards, press Control-Command-Eject to restart or Control-Command-Option-Eject to shut down. (Those commands actually attempt to save files before shutting down.)

For a hard reset, hold down the Power button on your Mac's front or side; on some early iMac and Power Mac models, you'll need to press the special reset button, sometimes using a straightened paper clip. A hard reset tosses unsaved documents.

Here's another alternative if you're a geek: If you happen to have another Mac on the same network and the frozen Mac has Allow Remote Login turned on, you can log on to the frozen Mac using Terminal. (Type `man ssh` at the command line to learn how.) Then you can use the shutdown command `sudo shutdown -h now` to shut down, or the `top` and `kill` commands (see the sidebar "10 Terminal Tricks," p28) to quit the problem app and keep computing.

5 Unfinished Startup

PROBLEM: Mac OS X gets stuck and refuses to start up completely.

SOLUTION: If Mac OS X halts the startup before it gets to the Mac OS X screen, and all you get is a blue screen, gray screen, or spinning ball, your system may be having a problem with external peripherals. Unplug them all and try starting up again. If that does the job, plug them in one at a time, restarting each time, to single out the culprit.

If a blue screen or the Mac OS X screen with a spinning cursor puts the kibosh on your startup, suspect a bad startup item (often a special utility of some sort). Restart in Mac OS 9 (or via a Mac OS 9 CD-ROM), navigate to the main Library folder and drag any third-party items out of the StartupItems folder to your desktop. Restart in Mac OS X—if your Mac gets through log-in, add items back to your StartupItems folder one at a time, restarting and testing each time you do.

You can also get a blue screen and spinner if you've set up your Mac to access an Ethernet-based Internet connection, but the domain name server (DNS) address is invalid or missing. Likewise, other networking issues can hang startup for a few minutes, so recheck your network settings. Also, it might help to unplug your Ethernet cable and see if that enables your Mac to start up.

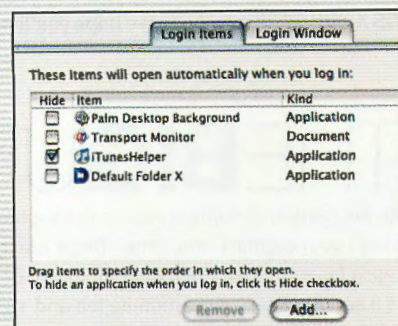
Finally, Apple notes that you might see a blue screen if you have a damaged Mac OS 9 font (since Mac OS X reviews fonts in the Mac OS 9 System Folder at startup). Start up from a Mac OS 9 CD, drag the Fonts folder from the Mac OS 9 System Folder onto the desktop, and restart in Mac OS X. If that works, drag the folder back to the System Folder,

checking the fonts one at a time for the misfit—or use a font-checking utility (see Problem 25, "Font Difficulties," p22).

6 Errant Log-in Items

PROBLEM: My Mac is trying to launch an item at log-in that's crashing my machine.

SOLUTION: If you have a problematic log-in item, hold down the Shift key immediately after you see Mac OS X's status bar and until the Finder appears. During this process, if you see the log-in window, release the Shift key, log in, then immediately hold down the Shift key again. Disable the item for good in the Login system preference.

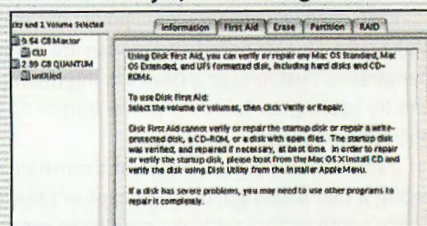


Disable misbehaving log-in items in the Login preferences pane.

7 Kernel Panics

PROBLEM: I'm getting a kernel panic! Sometimes my Mac just freezes, other times some 1970s-style, DOS-looking text appears onscreen.

SOLUTION: First, a quick message from the colonel: The kernel is the low-level core of Mac OS X that communicates directly with your hardware, and a kernel extension



Running Disk First Aid might root out the cause of your kernel panic.

is driver software that lets the kernel talk to a third-party device. Kernel panics often result from an errant kernel extension. Other times, corrupt files, conflicts, or general errors cause kernel panics.

To deal with a kernel panic, restart your Mac. Hold down Shift after hearing the startup tone—that launches Mac OS X without kernel extensions. See if you can reproduce the same error that led to the kernel panic. If you can't reproduce the error, then the problem probably lies with the most recent driver you installed; run its uninstaller or contact the manufacturer.

If you *can* reproduce the error with kernel extensions off, it might be a problem with the application or device you were using when the error occurred—possibly a bug or a known issue. Check Apple's (or the application author's or device manufacturer's) support site for hints.

Occasionally the problem is file corruption; run `fsck` (see "10 Terminal Tricks," p28), Disk First Aid (part of Apple's Disk Utility), or a third-party disk doctor.

8 Disobedient OS X CD

PROBLEM: I can't start up from the Mac OS X CD-ROM.

SOLUTION: Try booting up from a third-party startup-utility CD, like Norton Utilities or TechTool Pro. If this works and the OS X disc isn't

MAC OS X BUGS

damaged, Apple recommends checking for a firmware update for your Mac model (www.info.apple.com/support/downloads.html). If your firmware is up to date, then suspect a problem with a non-Apple expansion card, a peripheral, or a RAM module that isn't Apple certified and/or that did not ship with the Mac originally. Pull any or all of those out and try starting up from the CD again.

If you can't boot from *any* CD-ROM, you may have an Open Firmware password set. See Problem 50, "Easy Break-In," p29, for details.

9 Reinstallation Woes

PROBLEM: Nothing's working. Is my only choice to chuck Mac OS X and start over again? And do I have to reformat my disk to do this?

SOLUTION: If your machine's completely hosed, you probably need to reinstall Mac OS X. Under some circumstances, simply running the Mac OS X Installer application fixes problems and replaces corrupted or missing files, sometimes bringing a Mac back to life.

But there's a caveat—if you've installed Mac OS X updates that are newer than the Mac OS version on your installation CD, do *not* run the CD-based installer (for instance, don't run the 10.1 installer if you have Mac OS X 10.1.4 installed). If your CD doesn't match your current installation, Apple recommends that you back up important files, delete the existing installation, reformat the disk (which, don't forget, erases the *entire* disk), and reinstall the whole enchilada from the CD-ROM (start by installing the Mac OS 9 installer if you want to run Classic). Once you're up and running, use Software Update to install updates. No problem, eh? As long as you've been backing up...

SYSTEM SHORTCOMINGS

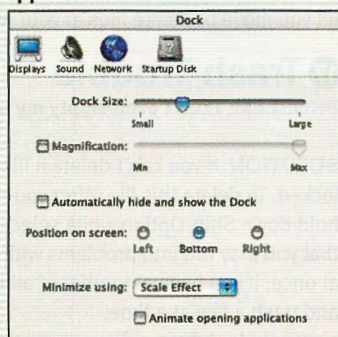
Mac OS X is all about performance, right? Yeah, right. Oftentimes, it seems as if Mac OS X is here to slow you down, not speed you up. Fortunately, you can fight back—a little.

10 Application Crawl

PROBLEM: As the day goes on, I notice that it takes longer to switch between applications or to access application commands.

SOLUTION: Because of the improved, dynamic way Mac OS X handles memory, you don't get out-of-memory messages as often as you did with Mac OS 9. That's a mixed blessing, though, because Mac OS X can slow to a crawl under the burden of running applications before it pops up an alert.

The first step when things slow down is to close some applications. You'll also notice



Turn off animation and you'll be at your destination a touch sooner.

slowdowns if the Dock animates icons while launching apps, but you can turn off this feature in the Dock preferences pane. Also, turning off Web Sharing and File Sharing frees up some RAM for better performance.

The best long-term solution is to install more RAM. It's also a good idea to restart individual applications every now and then, particularly e-mail, Web browsers, word processors, and programs that tend to stay open and process a lot of different documents. An app's memory can leak and fragment, causing it to slow down.

11 Spinning Beach-Ball Bingo

PROBLEM: You know what? I'm really sick of watching that spinning beach ball.



The nefarious beach ball spins again.

SOLUTION: The beach ball generally signifies that a computational task is taking up processor time. Usually, the beach ball is more prominent in Carbon applications, which do not take advantage of multithreading to the extent that Cocoa apps do. Remember that you can often switch to other applications (via Command-Tab or the Dock) while one app is stuck "thinking," then return to your original app.

When beach-ball encounters become chronic, restart the offending application; it may have confronted its own memory fragmentation. Likewise, a corrupt document could be causing the problem, so test different documents. If the problem persists, look for an update to that application and/or an update to the Mac OS itself. Consider upgrading a Carbon or Classic application to a Cocoa application or one with a better reputation for stability.

12 Burn, Interrupted

PROBLEM: I'm getting disk-space errors when burning a CD. Plus, I've noticed that I lose a lot of disk space from bad burns.

SOLUTION: If you receive an error message when burning a disc (usually Error -36), you may have run out of disk space while burning. Try deleting some files from your hard disk to make additional room for temporary files, then burning again. Also, whenever a CD burn session gets interrupted, run Disk First Aid (part of Apple's Disk Utility application) to recover some disk space that burning routines may take up temporarily.

13 Disappearing Disk Space

PROBLEM: Disk space on my Mac seems to dwindle rapidly. The amount of disappearing space easily outpaces how many apps and files I'm installing and storing on my drive.

SOLUTION: You may have an out-of-control log file (a file that stores error or other system messages), particularly if you've

Name	Date Modified	Size	Kind
log.log	9/2/01, 4:52 PM	Zero KB	Logfile
mail.log	4/3/02, 12:26 PM	32 KB	Logfile
monthly.out	3/1/02, 6:50 AM	4 KB	Document
network.log	3/1/02, 4:37 PM	180 KB	Logfile
OSInstall.log	2/8/02, 7:35 PM	4 KB	Document
secure.log	5/1/02, 1:42 PM	6 KB	Logfile
statistics	9/2/01, 11:18 PM	Zero KB	Document
system.log	Today, 3:05 PM	4.9 MB	Logfile
system.log.0.gz	4/3/02, 4:27 AM	4 KB	CDip archive
system.log.1.gz	4/2/02, 4:27 AM	68 KB	CDip archive

Check your log folders for bloated logs.

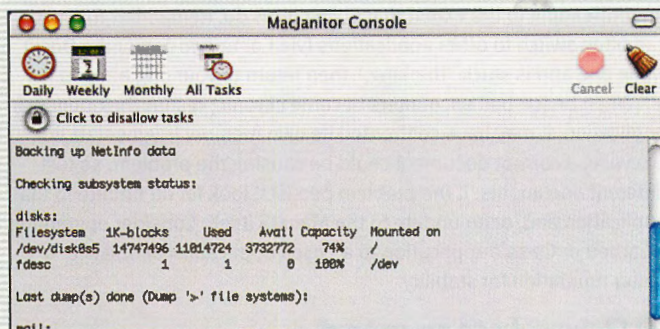
turned on Web file sharing or another networking server. This can also happen if you turn your Mac off every evening instead of letting it run all night. That's because the Unix subsystems of Mac OS X typically run system maintenance tasks between 3 a.m. and 5 a.m. If these

AND HOW

- ▶ maintenance tasks never run, log files sometimes grow extremely large.

First, check your log folders. From the Go menu, choose Go To Folder and type the following folder paths to these invisible files: `/private/var/log/` and `/private/var/log/httpd/`. Look for abnormally large files. If you find any, use the program MacJanitor (free, http://personalpages.tds.net/~brian_hill/macjanitor.html; on the Disc) to clean up your log files and run the kind of maintenance tasks that usually get done in the middle of the night.

Other potential munchers of hard drive space are the cache files for your Web browser (stored in your personal preferences folder). You can generally delete these safely. To take a gander at which files are eating up hard drive space, use OmniDiskSweeper (\$15, www.omnigroup.com/applications/omnidisksweeper; on the Disc), which will show you the biggest files on your disks and tell you which files your system uses so you don't delete them.



The freeware MacJanitor runs maintenance tasks for those of you who shut down your computers every evening.

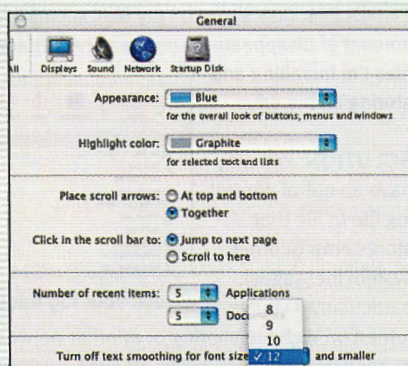
14 Fuzzy Fonts

PROBLEM: The fonts on my display look fuzzy.

SOLUTION: Your problem is most likely the result of font smoothing. We know that sounds weird, but smoothing works by purposefully making the edges of letters a bit fuzzy. Smoothing of certain point sizes on certain screens may not look right to some people.

Mac OS X allows you to change the smallest font for smoothing in the General system preferences pane. However, the limit is 12 points, and Mac OS X continues to smooth all fonts that are larger than 12.

You can get around this hitch by installing TinkerTool 2 (free, www.bresink.de/osx/TinkerTool2.html; on the Disc), which gives you much greater control over font smoothing. See "Troubleshooting Toolkit," p24, for more on this utility.



Change the font-smoothing setting in the General system preferences pane.

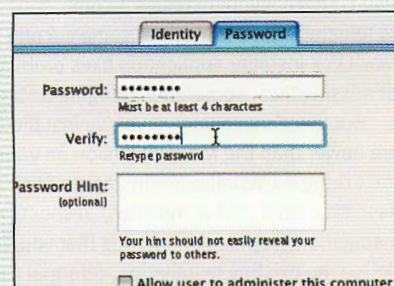
PRIVILEGE PROBLEMS

Two fundamental issues are completely new and different in Mac OS X: Unix-style privileges and the reliance on multiple user accounts. As a result, new and different troubleshooting issues abound...and abound.

15 Forgotten Passwords

PROBLEM: I, uh, I mean my friend forgot his password.

SOLUTION: You, uh, we mean *your friend* is not alone. If you know the password for an administrative account, log on to Mac OS X using that account and open the Users preferences pane. Now reassign your friend's password. If the problem is the root or your Admin account, boot up using the Mac OS X CD. From the Installer menu, choose Reset Password.



Change passwords in the Users preferences pane.

16 Obstinate Files

PROBLEM: I'm trying to move a file, but I get an error message saying that I don't have the privileges.

SOLUTION: In Mac OS X, privileges (and ownership) are everything. If you can't delete or move a file, even with an Admin account, that means the file has a different owner. This happens a lot with files other users create in the Shared folder or elsewhere on your disk. The solution is to either log on as the file's owner and move the file, or ask the file's owner to log on and move or delete it.

If those are not options, you can use the Terminal application to remove files (using the `rm` command) or change file privileges (using `chmod`), but the most user-friendly way to exorcise these files is to boot into Mac OS 9, which doesn't observe ownership issues and will let you move or delete files at your whim.

17 Trash Trouble

PROBLEM: I can't even empty my own Trash. What gives?

SOLUTION: If you can't delete a file that's in the Trash, it's probably locked. To delete this file (after you make sure you want to delete it), hold down Shift-Option while selecting Empty Trash. Apple also notes that you may run into problems with trying to delete too many aliases at once; if you have a number of aliases in the Trash, drag them out and trash a few at a time.

If you don't have privileges for the files you want to dump, you can delete them from the command line by entering `sudo rm -rf ~/.Trash/`.

DO KILL THEM



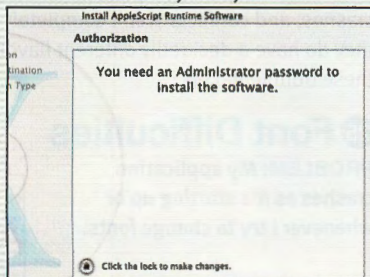
18 Mysterious Changing Privileges

PROBLEM: After I use the Package Installer to install something, privileges for my Applications folder and other items change, sometimes making it impossible to use certain applications or files.

SOLUTION: A bug in the Package Installer (Mac OS X's installer application) makes it possible for packages to accidentally change the permissions of important files and folders on your system.

Unfortunately, the only easy solution, if you can call it that, is to run an updated version of the installation package for the app, driver, or update you were trying to install (if one is available).

Otherwise, you can change the permissions back manually by using `chown` and `chmod` in the command line (see "10 Terminal Tricks," p28). If your problem is that privileges for the Applications folder changed after you installed Mac OS 10.1, Apple has a utility application that can fix the problem (<http://docs.info.apple.com/article.html?artnum=106609>).



The Package Installer has been known to mangle privileges it's not supposed to be playing with.

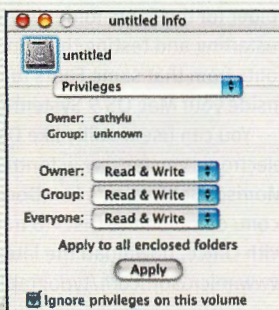
19 Disk Access Denied

PROBLEM: I'm having major problems accessing a secondary hard disk.

SOLUTION: According to Apple, a secondary disk can become unusable if you format your startup disk and reinstall Mac OS X. Even though you create the same user-account name in the Setup Assistant, the installer doesn't necessarily reassign privileges on the secondary disk to your new user account, so you end up unable to access files on that disk.

The solution is to select the disk, choose **File > Show Info** in the Finder, select **Privileges** from the menu, activate the **Ignore Privileges On This Volume** option, then restart your Mac. Select the disk again after you log in, and set privileges the way you want them using **Show Info**.

Here's a similar problem: You can access the secondary disk, but it won't save information about file privileges. For instance, you create a file on a FireWire drive and assign limited privileges, but that file remains accessible to everyone. That's because Mac OS X treats external drives as if they were removable, ignoring privileges and ownership. To change that, select the disk and disable the **Ignore Privileges** option via the **Show Info** dialog box. Now you can set privileges that Mac OS X will heed—but remember that you may have problems accessing these files if you connect the drive to a different Mac.



Choose to ignore privileges if you're having trouble accessing your own stupid disk.

20 Deleting a Deleted User

PROBLEM: I've deleted a user from my Mac, but I can't delete that user's home folder.

SOLUTION: This, my friend, is a job for Terminal!

Say that person's user name was mookie. Although you've deleted mookie, his home folder, now named *mookie*

Deleted, remains. To get rid of that extra baggage, make sure you're logged into an Admin account, open Terminal, type `sudo rm -R /Users/'mookie Deleted'`, and press Return. Then enter your Admin password and press Return again. Magically, Mac OS X will delete mookie's folder and its contents.



Even though we excommunicated mookie from our machine, the Finder won't let us trash his folder.

WHEN CLASSIC GOES BAD

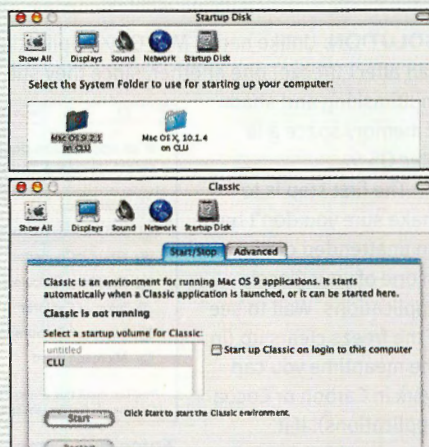
So you miss Mac OS 9? Luckily for you, the Classic environment lets you reminisce about the simpler days of Mac OS 9 troubleshooting.

21 SuperUser Complaints

PROBLEM: I'm encountering an error message telling me that I am running Classic without SuperUser (root) privileges.

SOLUTION: If you see this message in Mac OS 10.0.x, it means the volume that contains your Classic startup folder has its **Ignore Privileges** option turned on. Turn it off (see Problem 19, "Disk Access Denied," left).

In version 10.1.x, the fix, which comes straight from Apple, is slightly odd. In **System Preferences**, open the **Startup Disk** pane and select a valid Mac OS 9 volume, then choose the **Classic** pane and click **Start**. Return to the **Startup Disk** pane and select your Mac OS X volume again. Classic should work correctly for the foreseeable future.



To fix your Classic SuperUser problem, select your Mac OS 9 volume (top) and then start up Classic (above).

50 BIGGEST M

22 Classic Crashes

PROBLEM: Classic crashes or freezes as it's starting up. It gives me a bus error message or a blank white dialog box that I can't move, or it simply won't finish launching.

SOLUTION: What you've encountered is a standard Mac OS 9 startup problem, only here it appears in the Classic environment.

The best plan is to restart in Mac OS 9, then troubleshoot for an extension conflict (remember those?) or a driver problem (that's often what the bus error message indicates). When you start up in Mac OS 9, check to see if a dialog box requiring a response appears at the very end of the startup process (this may happen, for instance, if you've saved an AppleShare server alias in Mac OS 9's Startup Items folder).

If you can't figure out the exact source of your problem, have Mac OS 9 launch fewer extensions or startup items; hopefully that will eliminate the offender. Once you fix Mac OS 9, switch back to Mac OS X and cross your fingers that Classic will start up without trouble.

23 No Copy, No Paste

PROBLEM: I should be able to copy and paste between a Classic application and a Carbon or Cocoa application, but it's not working.

SOLUTION: Apple says this bug generally pops up when you choose to have Classic start up at log-in. Open the Classic preferences pane and turn off the Start Up Classic On Login To This Computer option. Also, note that copying and pasting between Classic and native applications can cause some slowdowns and beach-ball spinning as the system synchronizes the clipboard between the two environments. Shutting down and restarting Classic will sometimes improve copy-and-paste performance—that is, if you want to deal with the headache of shutting down and restarting Classic.

24 Classic Freezes

PROBLEM: All of my running Classic applications appear to be frozen.

SOLUTION: Unlike native Mac OS X applications, Classic applications can affect (freeze) one another, since they still do cooperative multitasking and share a memory space à la Mac OS 9.

The first step is to make sure you don't have an unattended dialog box in one of your Classic applications. Wait to see if the freeze clears up (in the meantime you can work in Carbon or Cocoa applications). If it doesn't, switch to the

Finder, press Command-Option-Escape, and then force-quit the offending Classic application. If that frees up the other Classic apps, save changes in them and quit *all* of your Classic apps. Otherwise, force-quit Classic, if it's listed, and start over again.

If your Classic problems are chronic, try starting up in Mac OS 9 and troubleshooting for extension conflicts and corrupt preferences or

other corrupt documents. Ultimately, you'll want to upgrade to native Carbon or Cocoa applications and leave Classic behind forever. Your life will be the better for it.

INEPT APPS

As much as Apple may try to downplay them, application freezes, crashes, and conflicts aren't completely gone in Mac OS X—although they do have a decidedly different flavor. Here's how to deal with these troublemakers.

25 Font Difficulties

PROBLEM: My application crashes as it's starting up or whenever I try to change fonts.

SOLUTION: Your problem may be a corrupt font, which can cause all kinds of problems in Microsoft Word, Adobe Illustrator, and other apps that check for fonts as they launch.

To fix wayward fonts, start by removing third-party fonts from the Fonts folder in your Library folder (or the Fonts folder in your home folder's Library folder), then restarting and testing the app. If it still crashes, remove nonessential fonts from that same Fonts folder, as well as from the Fonts folder inside your Mac OS 9 System Folder (which Mac OS X also uses).

You can use a utility like DiamondSoft's Font Reserve (\$89.95 electronic version, www.fontreserve.com; demo on the Disc) or MorrisonSoftDesign's FontDoctor X (\$69.99, <http://morrisonsoftdesign.com>; demo on the Disc) to track down corruption. If your problem is with Office, download the latest versions of Microsoft's fonts from www.microsoft.com/typography/free.htm.



The Fonts folder may hold the source of your application's woes.

26 Troubled Preferences

PROBLEM: An application freezes when it's starting up or when I change its preferences.

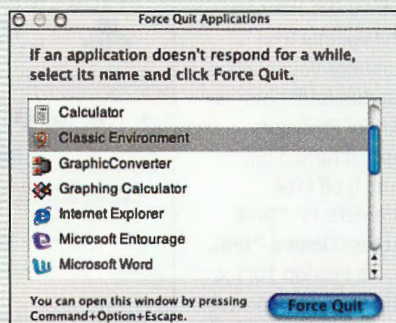
SOLUTION: Problems that aren't font related may stem from a corrupt preferences file. Quit the application, open

your personal Library folder, then open the Preferences folder and move that application's preferences file to your desktop. Now restart the application—if everything runs smoothly, trash the preferences file and reset your preferences within the application.

If that doesn't work, the genesis of your problem could be file corruption. See if you can re-create the problem with a different



Preferences reside in your personal Library folder. Look there for possible corruption.



Force-quit Classic to get out of a jam.

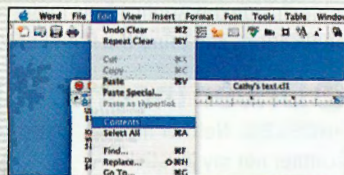
ACOSXBUGS

document. If you can't, the problem lies in the original document. Otherwise, run Disk First Aid or a third-party disk doctor. If the problem doesn't appear to be a corrupt file, consult the application's author to see if your problem is a known issue—or it's always possible that you have uncovered a new bug.

27 Errant Microsoft Menus

PROBLEM: My menus in Microsoft Word are exhibiting some very bizarre behavior—commands alter or disappear, and keyboard shortcuts change.

SOLUTION: Sometimes mutating menu commands constitute a feature, not a bug. In Word, the menus and toolbars can change depending on whether you're using a special document template, which you can select under Tools > Templates And Add-ins.



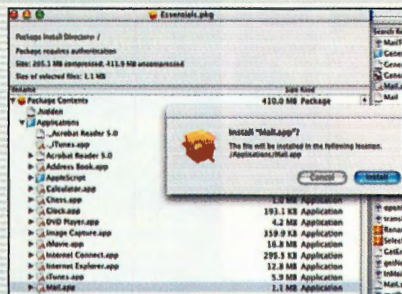
Word is supposed to have a **Clear > Formats** command in here...somewhere. Dumping the preferences file restores the menu.

If you're not working with an alien template, the problem may be that you upgraded to Office v. X from Office 2001, bringing forward some bad preferences from Office 2001's preferences file. To fix the glitch, open the Microsoft folder inside your personal Preferences folder and trash the Word and/or Office settings files; if that doesn't work, we've had luck trashing the whole Microsoft folder and letting Office rebuild all of its preferences. You can also try deleting the Normal template (in Office's Templates folder), which stores some preferences such as customized toolbars and commands.

28 Reinstalling Installer Apps

PROBLEM: I want to reinstall one of the apps that comes with Mac OS X. Can I do that without reinstalling Mac OS X?

SOLUTION: While the Mac OS X Installer can reinstall individual apps, only try it if you're running the same version of the OS as the one on your installer CD (for more info, see Problem 9, "Reinstallation Woes," p19). The easiest solution is Pacifist, a utility program from CharlesSoft (free, <http://homepage.mac.com/csrstka>; on the Disc), which enables you to extract an individual item such as Mail or TextEdit from Package files on the Mac OS X CD.



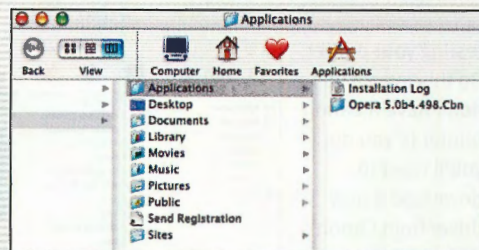
Pacifist allows you to extract individual files, like Mail, from your Mac OS X CD.

29 Dude, Where's My App?

PROBLEM: I can't find an application I just installed. Why are my apps playing hide-and-seek?

SOLUTION: If you installed the application via an installer (instead of drag-and-drop), your installer may have placed the program in your

home folder instead of the main Applications folder. Check for a new Applications folder inside your home folder, or look around and see if the application's installer created its own folder.

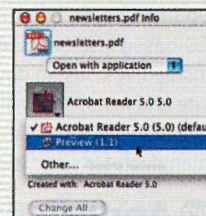


The Opera Web browser likes to stray from the beaten path sometimes and create an Applications folder in your home folder.

30 Wrong App!

PROBLEM: I can't get my files to open in the correct application.

SOLUTION: That's easy enough to fix. To open a document in the application you want, select the document and choose File > Show Info. In the Info window, select Open With Application and choose a new application from the pull-down menu. If you'd like all applications with this extension to launch in the newly chosen application, click Change All. (To blow creator and owner issues out of the water, check out SuperGetInfo. See "Troubleshooting Toolkit," p24.)



Open docs in the correct application by hitting up the Show Info window.

HARDWARE HEARTACHES

Many of the loudest user complaints about Mac OS X boil down to hardware and compatibility—or lack of compatibility. Consider yourself lucky when a driver for your peripheral is available—even luckier still when it actually does what it should.

31 USB Printer Perplexities

PROBLEM: My USB printer works, shall we say, erratically.

SOLUTION: The printer subsystem in Mac OS 10.1.x leaves something to be desired, to put it politely.

One problem that plagues many users is that printers stop working after you launch the Classic environment. In that case, your options include avoiding Classic or restarting the Mac OS after using a Classic application.

Also, Apple suggests that you not connect a USB printer to a USB port on your Mac's keyboard; use a port connected directly to your Mac or a powered hub for best results.

If you're getting printer errors, such as Error -108, or the Print Center crashes, Apple recommends deleting the printer driver folders (you'll find these in the Printers folder in the main Library folder). Start by trashing the Canon folder, which can be troublesome, and then

AND HOW TO

▶ testing your printer. Do this even if you don't have a Canon printer (if you do, you'll need to download a new driver from Canon's Web site).

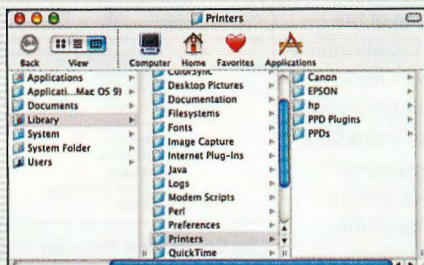
If that doesn't work, delete the Printers folder altogether, then

reinstall your third-party printer driver or use the Mac OS X CD-ROM to rerun the installer and reinstall the printer drivers. Of course, if you've updated beyond the OS version on your CD-ROM, you shouldn't run the CD-based installer (see Problem 9, "Reinstallation Woes," p19). Instead, it's best to download the drivers from the manufacturer's Web site and install them directly. Sometimes a compatible driver isn't even available via a Mac OS CD or Software Update session, so the manufacturer's site is usually your best option.

32 AppleTalk Printer Failure

PROBLEM: I can't connect to an AppleTalk printer.

SOLUTION: Apple notes that AppleTalk printers only work when one—and only one—network port (like Ethernet) is using AppleTalk at a time. If you've got an AppleTalk printer connected via Ethernet and your Mac can't talk to the printer, make sure you don't have AppleTalk active for another port, such as AirPort. In that case, open the Network



Your printer driver folders should go on the chopping block if your printer is error prone.

pane, select AirPort from the Show menu, click the AppleTalk tab, and make sure AppleTalk's not already active.

33 Failed Print Jobs

PROBLEM: I keep sending print jobs, but they keep failing. I don't even get the courtesy of an error message!

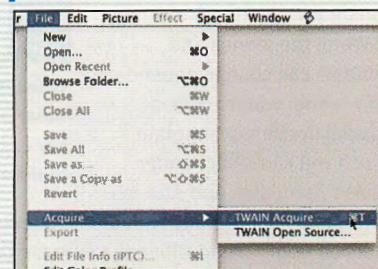
SOLUTION: Make sure you haven't moved or renamed the Utilities folder inside the Applications folder. According to Apple, if you have, applications can't find the Print Center to complete print jobs.

34 Driver Incompatibilities

PROBLEM: Neither my scanner nor my joystick works with Mac OS X. I'm very annoyed.

SOLUTION: Stand in line. With a new operating system come driver headaches, understandably. Still, scanner owners are sick of seeing messages like "XYZ Corp is committed to Mac OS X" and "Drivers are due any day now."

Well, keep hanging in there. Microtek, Canon, HP, and others are currently working on drivers—look for them at VersionTracker



You may be able to use the TWAIN command to get scans from your scanner—but this requires some sort of driver and the device must be TWAIN compliant.

TROUBLESHOOTING TOOLKIT

If you want to troubleshoot like the pros, check out the following apps:

EMERGENCY SOFTWARE

Keep these within arm's reach for when a good Mac goes bad.

ALSOFT DISKWARRIOR

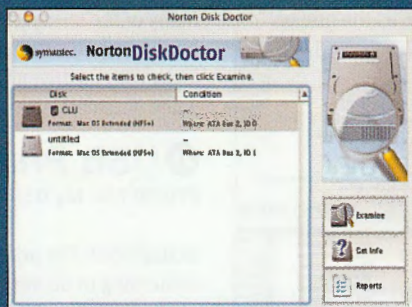
\$69.95, www.alsoft.com

You should run this near-miraculous utility first thing after a catastrophic disk failure, because it creates a replacement desktop directory to recover your data. DiskWarrior runs in OS 9 but can fix a Mac OS X disk.

SYMANTEC NORTON UTILITIES

\$99.95, www.symantec.com

The OS X version of Norton Utilities doesn't do everything previous versions could (for example, it's missing disk defragmenting), but it's great at fixing disks and finding lost files.



Norton Utilities can save your hide if your Mac has a meltdown.

MICROMAT TECHTOOL PRO AND DRIVE 10

\$97.98 and \$69.95, www.micromat.com

Use TechTool Pro 3 in Mac OS 9 to fix a disk, recover files (even on Mac OS X volumes), and optimize your drive. Drive 10 is a drive-repair utility that runs within Mac OS X.

BACKUP SOFTWARE

The best recovery tool, bar none, is a good backup. Here are a few to choose from:

DANTZ RETROSPECT EXPRESS (\$79) and **RETROSPECT DESKTOP** (\$249), www.dantz.com

POCKET SOFTWARE POCKETBACKUP

\$20, www.pocketsw.com; on the Disc

QDEA SYNCHRONIZE X PLUS (\$29.95) and **SYNCHRONIZE PRO X** (\$99.95), www.qdea.com; on the Disc

FIREWALL SOFTWARE

The Unix underpinnings of Mac OS X make your machine more of a target for hackers, so you should consider at least a software firewall if you spend some time connected. Here are a few options:

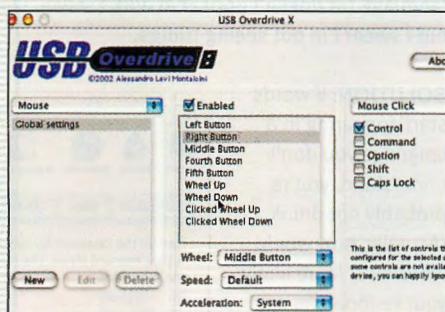
PLIRIS-SOFT FIREWALK X

\$34.99, www.pliris-soft.com; on the Disc

OKILL THEM



(www.versiontracker.com/macosx/drivers). For those of you who use Epson scanners and Adobe Photoshop 7, there may be a workaround (check out www.epsondevelopers.com/macscan/photoshoposx_install.jsp for more info). Plus, there is a little bit of good news in all of this: At least you don't have to wait on scanner applications to move to Mac OS X. Photoshop 7 and Lemke Software's GraphicConverter 4.4 (\$30, www.lemkesoft.com) both offer a TWAIN Acquire command that even works with some beta drivers. Or you can opt for Hamrick Software's VueScan (\$40, www.hamrick.com/vsm.html), shareware that enables scanning for unsupported models, even without drivers in some cases.



Just when you felt abandoned by your input devices' manufacturers, USB Overdrive lets you regain some control.

As for input devices, especially some game controllers, you may never get drivers from the company, but you might get help from Alessandro Levi Montalcini, author of USB Overdrive (\$20, www.usboverdrive.com). Using this substitute driver (the Mac OS X version is in beta as of press time; on the Disc), you can redeem quite a bit of functionality (including control over features like mouse speed and programmable buttons) for your mice, joysticks, gamepads, and other input devices.

35 Double Trouble

PROBLEM: Using two monitors is causing major problems, especially when I run Classic.

SOLUTION: Mac OS X may throw a wrench in the works for those of you who use dual monitors. For instance, Apple notes that in the Classic environment, OpenGL acceleration only works properly when you use one monitor. As a result, Classic games may slow to a crawl if you have dual monitors. The fix? Put your Mac to sleep and remove the second monitor before playing a game in Classic.

Some users have also reported trouble with dual monitors that use video cards from different manufacturers. For instance, conflicts between ATI and GeForce drivers (sometimes resulting in kernel panics) are known issues, but they may not be resolved by the time you read this. In rare cases, you can fix the problem by moving the ATI card to a different PCI slot; otherwise, you may need to replace one of the cards.

If the problem is that your Mac simply doesn't recognize your video cards (this happens more often in older Macs), you should again experiment with using different slots for your PCI-based video cards. You'll probably have the most luck with cards from the same manufacturer.

36 Blank Display

PROBLEM: In the Displays preferences pane, I unchecked the Show Modes Recommended by Display box. Then I tried to select a nonrecommended resolution and the screen went blank. Help!

SOLUTION: If you can, restart via a Mac OS 9 CD-ROM. Even without a display, you should be able to restart via the keyboard. Press the

INTEGO NET BARRIER

\$59.95, www.intego.com; on the Disc

BRIAN HILL BRICKHOUSE

\$25, http://personalpages.tds.net/~brian_hill/brickhouse.html; on the Disc

POWER TOOLS

Bend OS X to your will with one of these power-user favorites.

MARCEL BRESINK TINKERTOOL

Free, www.bresink.de/osx/TinkerTool2.html
With the aid of this ultimate user-interface tool for Mac OS X, you can enable and disable a variety of features, such as hidden files in the Finder; place the Trash on the desktop; and add a Quit item to the Finder menu.

ST. CLAIR SOFTWARE DEFAULT FOLDER X

\$34.95, www.stclairsoft.com; on the Disc
Default Folder X mends the open and save dialog box travesty that Apple has foisted

upon us. The utility adds menus so you can quickly navigate to favorite folders, recent folders, default volumes, and even folders currently open in Finder windows.

SYMANTEC NORTON ANTIVIRUS

\$69.95, www.symantec.com
Mac OS X's Unix roots make virus checking even more important than in the past.

APPLE DISK COPY

Included with Mac OS X
Buried within Disk Copy is not only the ability to mount disk images, but also to create them, encrypt them, and burn them to CD or DVD media. Sweet!

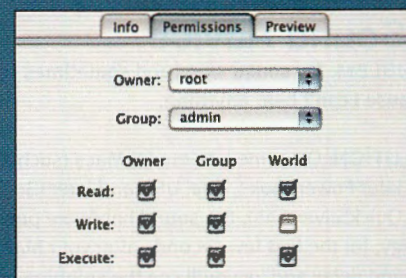
APPLE PROCESSVIEWER, TERMINAL, AND CONSOLE

Included with Mac OS X
Have you become truly intimate with your Unix-derived utilities? Check out Console for an easy way to read nearly indecipherable error logs, use ProcessViewer to explore the

status of currently running apps, and open Terminal to dig into the Darwin command line.

BARE BONES SOFTWARE SUPER GET INFO

\$20, www.barebones.com; on the Disc
From the BBEdit folks comes Super Get Info, a tool that extends the powers of Mac OS X's Show Info dialog box by giving you greater control over Unix-style permissions, as well as Mac creator and type codes.

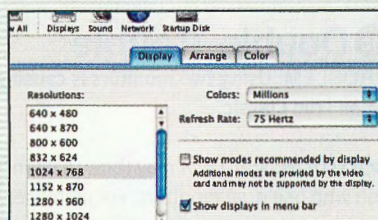


Access Unix-style permissions, play with creator and type codes—and try not to look like a geek while your mom lays out your clothes for tomorrow morning.

50 BIGGEST M

- Power key on your keyboard if it has one, or Control-Eject if not, then press R to restart. Listen for the startup tone, then quickly insert the Mac OS 9 CD-ROM.

When you see the Mac OS 9 desktop, open the Preferences folder inside the main Library folder and delete the file named com.apple.windowserver.plist. Restart your Mac (remove the CD after the startup sound so your Mac starts up in Mac OS X) to re-create a preferences file with a default monitor setting.



If you try to use a nonrecommended resolution, you may end up staring down a blank screen.

37 Finicky FireWire

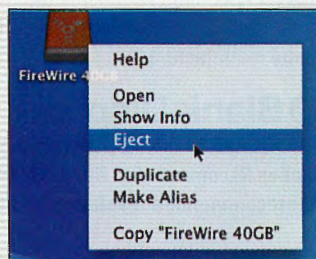
PROBLEM: I'm experiencing some technical difficulties with my FireWire devices.

SOLUTION: FireWire and Mac OS X are fairly good partners, but that doesn't mean they're not prone to an occasional domestic spat.

For instance, the Classic environment won't recognize FireWire cameras, so make sure you run the OS X-native version of iMovie. Plus, if you have an older FireWire drive, you may want to use your internal disk for camcorder-to-disk transfers.

If you're using two FireWire drives and copying between them, Apple notes that large copy operations will sometimes fail. To fix the problem, make sure you're using the latest Mac OS version, update the firmware on both FireWire drives (check with your drive's manufacturer for the latest firmware), and try copying smaller batches of files at once, if possible.

Finally, make sure you eject any FireWire drive's volume before unplugging the disk. (Drag the disk's icon to the Trash; select it and choose File > Eject; or Control-click the disk.) If you don't, you could lose data and cause Mac OS X errors or crashes.



Eject FireWire and USB external hard disks before disconnecting them from your Mac.

38 Sound Advice

PROBLEM: My sound skips and sometimes I swear I'm going deaf because I can't hear anything.

SOLUTION: On some late-model Macs (such as the Gigabit Ethernet and later PowerBooks, dual USB and later iBooks, flat-panel iMacs, and QuickSilver G4s), the sound hardware powers down to save energy; for the first few seconds after your Mac awakens, you'll notice a sound delay and/or you'll see the spinning beach ball. According to Apple, the current solution is to install external USB speakers. How convenient.

If you don't hear any sounds when your Mac wakes from sleep, open the Sound pane and make sure your system volume isn't on

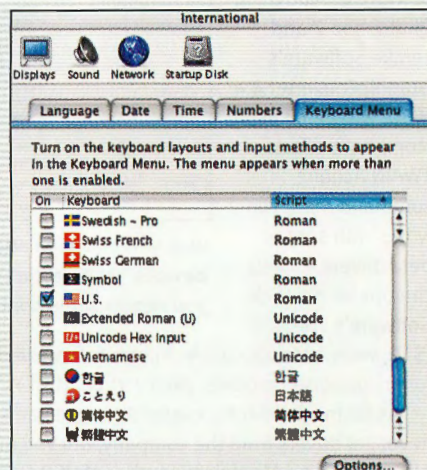
mute. If it isn't, put the Mac back to sleep and wake it up again. If that doesn't help, restart your Mac.

39 Typing Traumas

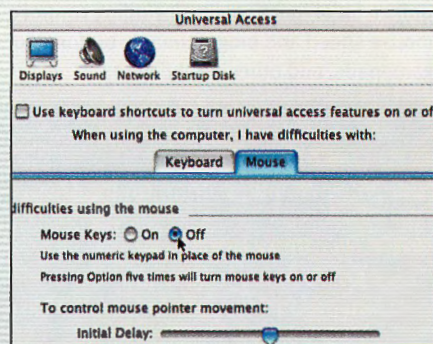
PROBLEM: I press a key and a character appears in another language (or doesn't appear at all!). I mean, I had a couple of beers, but I swear I'm not seeing things.

SOLUTION: If words start appearing in a language you don't understand, you're probably not drunk. (Actually, how would we know?) More likely, your keyboard is not set to the same language as your system. Look for a keyboard menu (it has a nation's flag as its icon) on the menu bar. Open it and choose the correct keyboard layout. If you don't see a keyboard menu, open the International preferences pane, click the Keyboard Menu tab, and make sure the box next to the correct language (you know, yours) is checked.

If your number pad isn't working correctly, you may have inadvertently turned on Mouse Keys. Select the Universal Access preferences pane and click the Mouse tab. Make sure Mouse Keys is turned off to get the number-pad functionality back.



We want to click U.S. here, not Swiss German or Vietnamese.



Turn off Mouse Keys in the Universal Access pane if it interferes with your number keypad.

40 Closed PowerBook

PROBLEM: I'm trying to use my PowerBook G3 with a monitor, keyboard, and mouse while leaving its lid closed. But when I wake the computer, it only wakes up for a few seconds before going back to sleep. Is my PowerBook narcoleptic?

SOLUTION: Well, first you need an external keyboard that includes a power key (this rules out the latest Apple Pro USB keyboard). Shut down the PowerBook (don't just put it to sleep), and plug in the display, mouse, and keyboard. Press the power button on the keyboard to start up your PowerBook without turning on its LCD.

MAC OS X BUGS

NOT WORKING NETWORKING

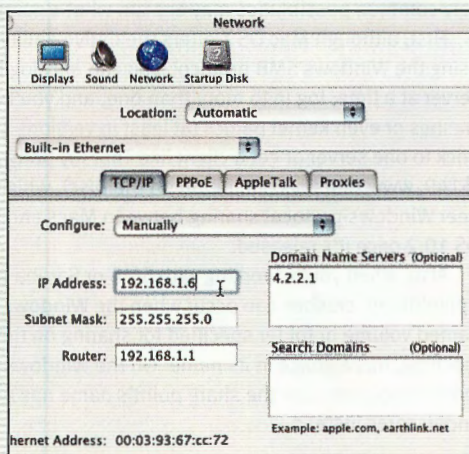
Sure, we welcome high-end, superdeluxe networking systems like Mac OS X—but often they come with their own headaches. Before you get out the Tylenol, though, check some of the fixes below.

41 G-g-g-ghost Servers

PROBLEM: I see more than one instance of the same AppleShare server in the Connect To Server dialog box.

SOLUTION: You might see more than one of the same AppleShare or File Sharing server when your network uses DHCP to assign IP addresses dynamically. Even though the Macs on your network constantly appear at different IP addresses, your Connect To Server feature keeps track of older IP addresses.

Unfortunately, this bug has no obvious solution, just workarounds. Apple says to cut down on this paranormal clutter (that is, to delete the files that are keeping tabs on these addresses) by opening the



If you have an Internet router, you may find it handy to just go ahead and specify static IP addresses on your LAN.

Terminal and typing `sudo rm /var/slp.regfile`, then pressing Return. Enter your admin password and press Return again, then restart your Mac. (Do this for any affected Macs on your network.) The ghost servers should disappear...for now. (Mwa-ha-ha-ha!)

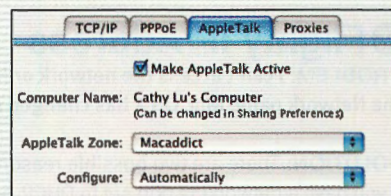
To avoid the issue altogether, assign manual IP addresses on your LAN, if possible; if you're using an Internet router, simply select IP addresses in your local range (for example, 192.168.1.2, 192.168.1.3, and so on) and assign them to your Macs. Use the router's IP address (often the .1 or .254 address of your IP range) as the router address in your Network pane. Or you can use AppleTalk for file sharing (turn on AppleTalk in the Network pane, then select the AppleTalk neighborhood in the Connect To Server window); this is slower but less troublesome.

42 AppleTalk Is Active, Yet Inactive

PROBLEM: I swear on my dog's life that AppleTalk is turned on, but I'm not seeing AppleTalk servers (or in some cases AppleTalk printers).

SOLUTION: Luckily for your dog, the problem is probably that your Mac isn't recognizing the AppleTalk zones on your network. Apple's

solution is to try turning AppleTalk off and on again (don't forget to click Apply Now in the Network pane). If that doesn't help things, create a new location (choose New Location from the Location menu) and switch to that location, then switch back to Automatic. You should now see the AppleTalk Zone menu spring to life, enabling you to select your local AppleTalk zone.

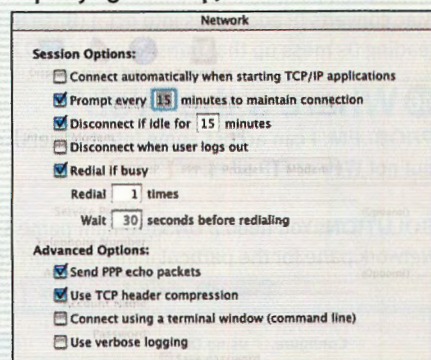


If your Mac doesn't want to recognize your AppleTalk zones, try turning AppleTalk off and then on again. Don't ask us why, but sometimes that works.

43 Modem Keeps on Going...& Going

PROBLEM: My modem keeps trying to dial up, even when I'm not asking it to. What can I do?

SOLUTION: This one's easy. Your modem is probably set for automatic connections. In the PPP tab of the Network preferences pane, click PPP Options and turn off Connect Automatically When Starting TCP/IP Applications.

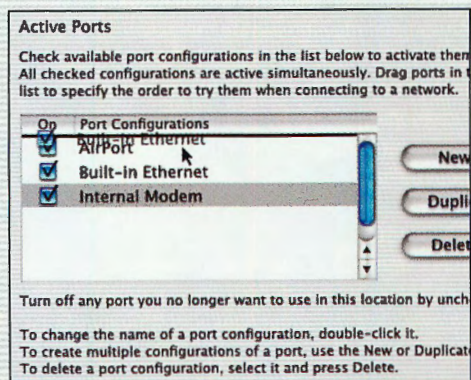


Turn off autoconnect to keep your Mac from experiencing psychodialing phenomena.

44 Wrong Port

PROBLEM: I want to connect via Ethernet or AirPort, but my Mac insists on dialing out through my poky modem.

SOLUTION: Mac OS X's multihoming feature (the ability to use more than one TCP/IP port at once) is great, but it can be confusing, too. If you notice that your Mac is giving priority to the wrong port (say, your modem over Ethernet), you can change which port your Mac tries first. Open the Network pane and choose Active Network Ports from the Show pull-down menu. You can set the order of priority by dragging the items around in the list; the system tries the top port first, followed by the next, and so on.



Drag ports around to change their priority.

AND HOW

▶ 45 Flighty IP Address

PROBLEM: I can't access the network or Internet, and when I go into the Network pane, Mac OS X has changed my IP address.

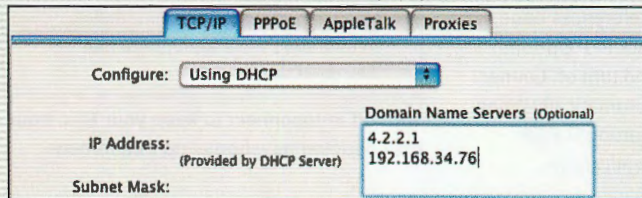
SOLUTION: There are two possible reasons for this capriciousness. If you have a networking port set to DHCP, but you don't have a DHCP server (or the connection to the DHCP server isn't established because the server is down), Mac OS X randomly assigns an IP address after a few moments. To reset the address, connect your Mac to the DHCP server (for instance, turn on your cable modem or connect to your LAN), go to the TCP/IP tab of the Network pane, select Manually from the Configure menu, and click Apply Now. Then change back to Using DHCP and click Apply Now again.

The other possibility is that you're entering IP addresses with leading 0s—for example, 192.168.001.001. That's a no-no, as your Mac converts IP addresses into octal (Base 8) numbers, and the leading 0s mess up that translation. Use 192.168.1.1 instead.

46 Where's the Web?

PROBLEM: I can access some Internet services, such as my email, but not Web or FTP sites.

SOLUTION: You need a DNS (domain name server) entry in the Network pane for the particular Internet port you're using. Without



Add a DNS entry if you're having problems accessing the Web.

access to DNS, your Web browser and other applications can't translate named resources (as in apple.com) to numbered IP addresses. If you have a direct connection to your ISP, enter the ISP's DNS address; if you're using a router that connects to DNS automatically, you'll often use a special address for the DNS entry (check your router's manual).

If you have a DNS entry, the DNS computer may be down; contact your ISP to see whether an alternate DNS address is available.

47 Windows Snubbing

PROBLEM: I'm on one of those annoying multiplatform networks, and my Mac crashes whenever I try to access a Windows or Windows NT server volume.

SOLUTION: Although we'd like to think this problem results from an evil Microsoft plot to rid the world of Macs, it (probably) doesn't. Two very common possibilities may explain what's going on.

First, although Mac OS X offers the native ability to log in to servers using the Windows SMB protocol, you can only log in to one such server at a time; log in to more than one, and you'll experience crashes or even kernel panics (at least in versions 10.1 to 10.1.4). Stick to one server or get a client like Thursby Software's Dave (\$149, www.thursby.com; demo on the Disc), which enables peer-to-peer Windows-protocol sharing between Macs and PCs. Or grab Mac OS 10.2 once it's released.

Also, when you're working with SMB or Samba (and sometimes AppleShare), crashes can occur when the Windows *share point*, the named volume or folder specified for sharing on the Windows machine, has a space in its name. On the Windows machine or server, make absolutely sure the share point's name has no spaces—use underscores instead.

10 TERMINAL TRICKS

Although it may intimidate the bejesus out of you, the Terminal application offers powerful features and bailouts for many a sticky situation. Here are 10 commands you might appreciate knowing when the you-know-what hits the fan.

1 sudo

This command grants root privileges for a particular command; for instance, to delete all items in the current working folder, type `sudo rm *`.

2 cd and pwd

If you aren't familiar with the Unix command line, here's your crash course for looking like you know what you're doing. Use the `cd` command to change the current working

directory—it's sort of like clicking a folder in the Finder. Type `cd /` to move to the root folder on your Mac, or `cd /Library/` to change to the main Library folder. Type `cd ~/Documents` to change to the documents folder inside your home folder. Type `pwd` to see the current working directory, just in case you've forgotten. (It also usually appears in the title bar of the Terminal window.)

3 ls -l or ll

Type `ls -l` or `ll` (that's the lowercase letter l, not the number 1) to see a long listing of items in the current folder. This is useful for showing hidden Unix files and the permissions for files and folders. Typing `ll ~/Pictures` would list all files in the Pictures folder inside your home folder.

4 chmod

Use this command to change file permissions (like those you would set in the Show Info dialog box) at the command line. This command takes either numbers (like `777`) or flags (like `u+x`, which turns on execute permissions for users) as arguments. For example, `chmod 777 myscript.pl` would change the privileges for a hypothetical file called `myscript.pl` to read, write, and execute for all users (visit <http://acm.unl.edu/resources/tutorial.php#perm> to find out more about numbers and flags). You'll often need to use `sudo` with this command, as well as `chown`. Type `man chmod` at the command line to learn more.

5 chown

Employ this command to change the owner information for a file or folder. For instance, you might type a line like this: `sudo chown`

OKILL THEM



SECURITY CONUNDRUMS

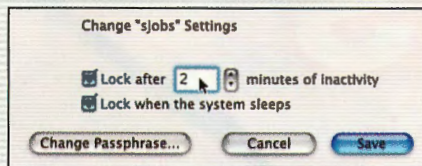
With all of the viruses and hacking going on around us, computer security is on everyone's minds. Because Mac OS X has Unix at its core, it presents some slight twists on our cozy little bulletproof Mac OS of the past. For one thing, it's slightly less bulletproof.

48 Keychain Insecurity

PROBLEM: I notice that my Keychain, which stores all of my passwords, opens automatically when I log in. Um, isn't that a problem?

SOLUTION: Um, it can be, if your computer is in a high-traffic area. The solution is to set stringent self-locking preferences

via the Keychain Settings dialog box (in the Edit menu) in the Keychain Access app. From there, you can choose to lock the Keychain after a specified amount of time and/or when your Mac goes to sleep. For even more security, use the same settings box to change your Keychain's password to something other than your log-in password.



Use Keychain Access to change your security preferences.

49 Denied!

PROBLEM: My log-in password doesn't unlock my Keychain.

SOLUTION: This can happen when an administrator (other than yourself) changes your log-in password. You'll need to use your

previous password, either the original password assigned to your account or any subsequent passwords you assigned via the Users pane or Keychain Access application, to open the Keychain. You can then change the password via the Edit > user name Settings command in the Keychain Access app.

50 Easy Break-In

PROBLEM: I'm concerned that someone with a Mac OS startup CD can easily bypass my Mac's log-in screen.

SOLUTION: That's true. The log-in screen is only as secure as your Mac's keyboard and CD drive. You can, however, activate a more secure password scheme using the Open Firmware Password application, which works only on the latest rounds of iMacs, iBooks, PowerMacs, and PowerBooks—basically, any Mac that supports Open Firmware 4.17 or later. (See <http://docs.info.apple.com/article.html?artnum=106482> for more info.)

First, make sure your firmware is up to date by checking at www.apple.com/swupdates. Next, download the Open Firmware Password software (<http://docs.info.apple.com/article.html?artnum=120095>). Install the application and launch it, following Apple's instructions closely. When you're done, your Mac will no longer be able to start up from a CD-ROM, as a target disk, or in various other startup modes without the proper password. Just don't forget this password, ever, or you may end up, as they say, screwed. ■

Todd Stauffer has written more than 25 computing books, including *Mastering Mac OS X*, second edition (due in early fall, Sybex). He admits to occasionally calling his favorite operating system "Mac OS XP," but only in the heat of troubleshooting woes. He swears he doesn't mean it.

`stevej photo1.jpg`. This changes the ownership of a file called photo1.jpg to a user named stevej. In a multiple-user situation, you can use `chgrp` to change the group associated with a file; type `man chgrp` to find out more.

6 top, ps, and kill

The command-line version of ProcessViewer is `top`—type it to see a list of running processes, and press Command-C to exit the application. (For a more comprehensive list, type `ps -aux`.) Both `top` and `ps` are useful for finding out the PID (ID number) of, say, an app that has crashed. Using the PID, you can then use the `kill` command to force-quit that process (as in `kill 392`).

7 Single-User Mode

When you're having trouble getting your Mac to start up or log in, hold down Command-S

immediately after your Mac starts up to boot into single-user mode (see `fsck`, below). If you need to alter files, mount the hard disk by typing `mount -uw /`. From there, regular Unix commands will work. Be careful—you're now in the root account, so you can make any change to the system and even potentially damage it.

8 >console Log-Ins

In the log-in window, you can directly access the command line by typing `>console` instead of a user name (choose the Other icon if you only see user icons in the log-in window). This is great for bypassing trouble with log-in items or the Finder; now you're free to log in and fix a problem—for instance, deleting an offending preference file (using the `rm filename` command) and exiting to the log-in window (type `exit` and press Return).

9 fsck

For major disk errors, you can run Apple's `fsck` utility. Boot into single-user mode, type `/sbin/fsck -y`, and press Return. Mac OS X will check and fix your disk if possible. Sometimes a single pass doesn't fix every problem on the disk; you may need to run `fsck` repeatedly.

10 ping

Along with other familiar Net utilities (`nslookup`, `finger`, `whois`), you can use a command-line `ping` to test a network connection quickly. Type something like `ping apple.com` to test Internet access, or `ping 192.168.1.4` to test a LAN-based connection. If you get a scrolling list that shows how many milliseconds it took to receive the packet, you know the connection is working. Press Control-C to stop `ping`.

Skywalker Sounds

Macs played a thunderous role in the creation of *Star Wars: Episode II*

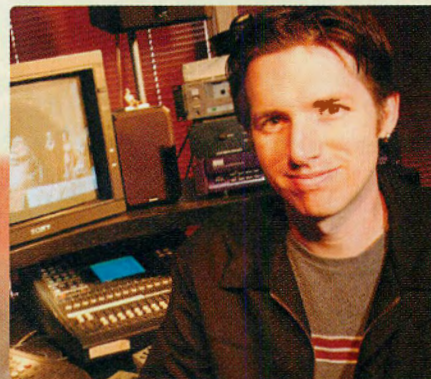
Without Matthew Wood, much of *Star Wars: Episode II* would have been a silent movie. Without Wood, the Geonosians' cackling would not have sounded so fingernails-on-a-blackboard shrill. Without Wood, dialogue-replacement sessions would have taken twice as long to complete. And without Wood, Skywalker Sound editors might not be as Mac savvy as they are today.

So just who is Matthew Wood? For one thing, he's a *MacAddict* subscriber. Of course. He's also Bib Fortuna in *The Phantom Menace*. Oh, and he was the supervising sound editor for *Star Wars: Episode II—Attack of the Clones*.

For *Episode II*, Wood was in charge of making sure that all sounds (including dialogue, sound effects, and music) complemented the onscreen action—a feat accomplished entirely on the

Mac. In fact, Skywalker Sound, George Lucas's state-of-the-art sound-production company, is now a completely Mac-based Pro Tools editing facility, having scrapped hefty tape reels in favor of hard disks.

Shortly before *Episode II*'s release, we visited Skywalker Ranch, a scenic enclave nestled in the hills of Marin, California, to meet the man responsible for just about everything you can hear in the theater (besides the popcorn noshing and soda slurps) when you watch *Episode II*. Ignoring our stupid jabs at Jar Jar (his response: "Meesa have no comment, but don't trust him to represent your planet!"), a laid-back yet enthusiastic Wood sat down with us to sing the Mac's praises and take us through the process of how the movie's sound came together with the help of his (and our) favorite computer.



by Kris Fong

photography by Mark Madeo

Star Wars: Episode II images courtesy of Lucasfilm



**ON THE
DISC**

ADRSudio Overview,
Waves 3 demo, and our
interview with Matt Wood



Having worked his magic on high-profile films such as *Titan A.E.*, *Armageddon*, *Con Air*, and *Mission: Impossible*, Wood is the reigning poster child for changing the way sound work is done in films today. He constantly seeks out new Mac apps and technology to streamline his workflow, and uses his knowledge to build his own creations—for example, combining a PowerBook G4 and Pro Tools to create a groundbreaking, portable ADR (automated dialogue replacement) system, in which an actor records replacement dialogue, matching the words and lip movements of the original performance.

By staying ahead of the technology curve, Wood became a huge asset to Skywalker Sound when the group transitioned to a Mac-based Pro Tools editing suite. He trained traditional editors, accustomed to cutting magnetic-based film, in digital technology. "Learning from the masters of sound editing and then being able to teach them something—I felt valuable," Wood says humbly. This comes from a guy who used to freak out his dad when he'd lug his first Mac—a Mac Plus—by the handle to school every day to create and trigger sound effects (with HyperCard) for a high-school TV show. "My dad bought a Mac," he tells us. "Thank God he didn't buy a PC!"

For the latest *Star Wars* saga, Wood worked alongside creator and director George Lucas and legendary sound designer Ben Burtt (who created the original *Star Wars* sound) on all facets of *Episode II*'s audio. This included the dialogue, sound effects, ADR, and Foley (sound effects recorded live to match action in a scene, like footsteps; the process is named after its inventor, Jack Donovan Foley).

At first glance, Wood's sound-design suite looks somewhat minimalist—until he shows us the big guns stashed neatly away in a large

soundproof closet: a 733MHz G4 with a Pro Tools Mix Core System. On his desk sits an old AppleVision 20-inch monitor (soon to be upgraded to a new Cinema HD Display); a Mackie HUI (human user interface) Controller, which he uses for tactile control of Pro Tools; a Yamaha outboard mixer to handle auxiliary gear; a DAT recorder; and a Deva four-channel disk recorder. In fact, much of *Episode II*'s audio magic started right here.

A Long Time Ago...

Before shooting even began, Wood and Burtt were already planning how *Episode II* would sound. Using storyboard images as a guideline, they used Pro Tools to create *temp tracks*, temporary audio tracks that give the director an idea of how scenes will sound. To create these tracks, Wood and Burtt pulled elements from Skywalker Sound's "restricted" library—a massive collection of sounds defining the *Star Wars* universe, painstakingly organized and maintained by Wood with Gallery Software's Mtools. This server-client cataloging tool streamlined the editing and mixing process by allowing the sound crew to search for and audition sound files, and import them directly into Pro Tools, editing sounds as needed to fit a scene. As *Episode II*'s sound designer and editor, Burtt devised a list of the sounds required for the movie's new characters, vehicles, weapons, and environments.

Once they completed the temp tracks, they sent the sub mix (an edited mix of the temp tracks synced with the storyboard

Wood's Words of Wisdom

Wood offers five bits of advice if a career in sound editing is in your future.

1. Buy Pro Tools. "It's a giant force in the industry," he says.
2. Read *In the Blink of an Eye: A Perspective on Film Editing* by Walter Murch and Francis Ford Coppola (Silman-James Press, 2001), and *Sound for Film and Television* by Tomlinson Holman (Butterworth-Heinemann, 2001) to learn about film sound and its history.
3. Be positive, don't be arrogant, and learn how to work with people. Most productions are project-based, and if you're not a team player, you won't get hired again for the next project.
4. Get an education in digital audio. Wood recommends Full Sail in Orlando, Florida (www.fullsail.com)—Skywalker Ranch hires many graduates from there.
5. Keep current with the technology and artistry of films. Study soundtrack work and visit Web sites (like those of Apple and other companies that make tools for digital-audio and -video editing) to learn about the latest developments.

Tools of the Trade

Sound Design Suite

Hardware

- Aardvark Word Clock (www.aardvark-pro.com)
- Apple 733MHz G4 with 512MB of RAM and SuperDrive (www.apple.com)
- Digidesign Pro Tools Mix 888/24 Audio I/O (www.digidesign.com)
- Digidesign SoftSampleCell with MIDI Keyboard
- HHB 850 CD Recorder (www.hhbusa.com)
- M&K 5.1 Monitors (www.mkprofessional.com)
- Mackie HUI Controller (www.mackie.com)
- Parasound HCA-1205A 5.1 Power Amplifier (www.parasound.com)
- Magma PCI-to-PCI Expansion Chassis (www.magma.com)
- Symbolic Sound Kyma Cappybara (www.symbolicsound.com)
- THX CC4 5.1 Channel Subwoofer Crossover-Controller (www.thx.com)
- Yamaha 03D Digital Mixer (www.yamaha.com)
- Zaxcom Deva II Disk Recorder (www.zaxcom.com)
- Z-Systems Digital Detangler (www.z-sys.com)

Software

- Apple DVD Studio Pro
- Apple Final Cut Pro 3
- Digidesign Pro Tools
- Gallery Software Mtools (www.demon.co.uk/gallery)
- Gallery Software SampleSearch
- Gallery Software Session Browser
- Norman Franke's SoundApp (www.spies.com/~franke/SoundApp)
- Roxio Toast Titanium (www.roxio.com)
- Waves TDM Plug-ins (www.waves.com)



In the sound suite, Wood uses a Mackie HUI mixing board with a Pro Tools enhanced keyboard for tactile control over Pro Tools software. His Deva recorder sits on the shelf above.

ADR Rig

Hardware

- Apple 500MHz G4 Titanium PowerBook with 512MB of RAM and upgraded 48GB Hard Drive
- Aurora Fuse Video Card (www.auroravideosys.com)
- Digidesign Pro Tools Mix 888/24 I/O
- Focusrite Green Dual Mic Pre (www.focusrite.com)
- Magma 4 Slot Cardbus-to-PCI Expansion Chassis
- Rane Headphone Amplifier with Inline Mixer (www.rane.com)
- Recortec RMM-505 1RU (One-Rack Unit) Flat-Screen Monitor (www.recortec.com)

Software

- Apple Final Cut Pro 3
- Digidesign Pro Tools
- Gallery Software ADRStudio

images) to Skywalker Ranch's screening room in the main house, via ISDN line, to give Lucas an idea of how everything would work. This part was important, explains Wood: "It saves a lot of creative time because you're not going down too many creative avenues that are going to get shut down after you've spent tons of time on them." Once Lucas green-lighted the general idea for the movie's sound structure, Wood, Burtt, and the sound effects team set to work on creating the new sounds.

Sound Effects

"Don't get bit." Wood mutters these three words to himself just before hearing the screeching cries of hungry flying foxes (batlike creatures) in one of his sound samples. No, he isn't out hunting vampires—he's recording sounds of what will become the Geonosian race. (For those two of you who haven't yet seen the movie, the Geonosians are the battle droid-building inhabitants of the planet Geonosis.) The secret recipe? Combine one part flying foxes with one part penguin colony and have Ben Burtt mix them with Pro Tools. In fact, Burtt created many of *Episode II*'s sound effects

from real-life clips. To get the organic foundation, Wood headed for the land Down Under, where the movie was shooting, with his Deva in tow (not the Madonna variety—his portable disk recorder).

Burtt and Wood worked like a couple of tag-team wrestlers. Armed with Burtt's sound list, Wood ventured through the

Australian rainforest and beyond, recording samples (which he saved on disk as SDII files) of sounds from exotic birds, flying foxes, penguins, and other creatures, and then cataloged them in Mtools for Burtt to screen remotely. Wood pounded the pavement collecting raw sounds and handed them off. Then Burtt picked through the ▶



Wood demonstrates how sound clips are layered together in Pro Tools to build a scene's soundtrack.

► sounds; tweaked his own choices using a multitude of plug-in effects, EQs, and pitch bends; and layered tracks in Pro Tools to create the new sounds.

Syncing Sound to Scenes

Once the edited movie footage started coming through the pipeline, Wood had to make sure that pictures and sound synced perfectly and that an appropriate sound accompanied every facet of action onscreen, whether the sound was original dialogue, sound effects, Foley, ADR, or music. Because many movie scenes came to Wood as completely silent video clips (*Episode I's* Pod Race sequence, for instance) or with original dialogue alone, it was up to him, Burtt, and a team of editors to create the entire sound environment from the ground up.

For scenes with established sound elements (lightsabers, R2-D2, and Watto's flapping wings), they pulled the appropriate audio files from the sound library and tweaked sounds to match the scene. The team then carefully synced these elements, as well as Burtt's newly designed sounds, to the action in the digital-video footage.

Master of Invention

About half of the movie's original dialogue remained intact. Wood had to add the rest via ADR, a standard film practice of rerecording dialogue in studios after the fact, necessitated

by unwanted noise from factors on the set like wind, creaky floors, and bumps. ADR is also one of the most time-consuming aspects of postproduction. "It's a really challenging process to go back and get that ADR," says Wood, "because you're bringing an actor back into a sterile studio, and they have to remember what they did a year ago and get the dramatic performance correct, as well as getting it in sync with the lips."

According to Wood, most movie productions record ADR in various studios, which can cause problems because you typically wind up with dialogue recorded on different tape formats by varying recording engineers in separate sounding rooms, all of which contain different mics and mixing boards. You then have to find a way to integrate the snippets of dialogue with your own sound-editing system and balance it all in the mix.

This bothersome process annoyed Wood so much that he rigged his own portable ADR system with a 500MHz G4 Titanium PowerBook at the center, along with Pro Tools, some outboard gear, and Gallery

Software's ADRStudio (see "ADRStudio: The Editor's Cut Above," p35). "We put together a rig that we could travel with," he says, "so we could always make sure we got the same technical content everywhere we went."

When it came time for reshoots, Wood hauled his PowerBook ADR rig to the set or to a nearby location, and set up a soundproof room near where the action was happening. This allowed the actors to shoot scenes in one room, and then walk into Wood's room to rerecord dialogue from scenes shot six months prior. "George [Lucas] is always in the room with me on every ADR session," explains Wood. "He directs the dramatic part and I direct the technical and lip-sync part. It's a very involved system of synchronizing videotapes with the audio, and having to cue the actor when to speak with beeps and a video streamer [visual screen cue], and then record [the audio] back down to another system, play back that audio in reference to the picture, and duck in and out of the original production sound to hear how it's all going to play together. The Mac was able to handle all of that."



Though it lacks wheels, Wood's all-in-one ADR rig is truly portable (and back breaking).

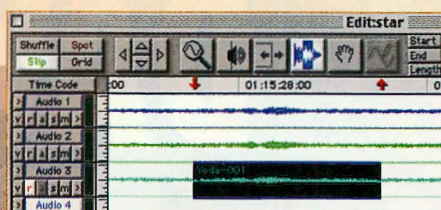
ADRStudio: The Editor's Cut Above

With standard ADR (automated dialogue replacement) methods, transferring all the ADR from various tape formats to a Pro Tools system can be a slow and tedious process. That's why Wood enlisted Gallery Software's ADRStudio (\$1,695, www.demon.co.uk/gallery), which integrates directly with Pro Tools, making his portable rig a true all-in-one ADR studio. Here's how a typical ADRStudio session works, in a nutshell.

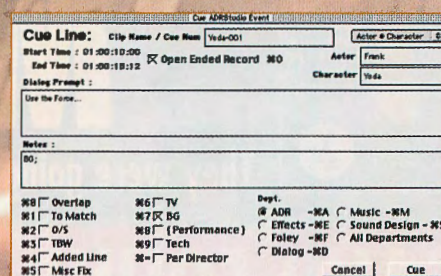
1 Spot the Dialogue In Pro Tools, with ADRStudio running, highlight the dialogue line you want to replace. Press F4 to have ADRStudio automatically note the In and Out times and present a Cue dialog box, where you can enter information about the pending recording.

2 Fill Out the Paperwork In the dialog box, fill in the details of the ADR segment, such as the dialogue line, actor's name, and director's notes pertaining to that spot. The application compiles and stores this information in a script list that you can sort, filter, arrange, and print for the director and the rest of the sound-editing team.

3 Record the Replacement Select the line you want to replace in the script list; ADRStudio automatically controls Pro Tools to record-enable the tracks. Then select a Pro Tools track to record on, set the beeps to prompt the actor, and enable recording. ADRStudio prompts the actor with beeps and video streamers, mutes and unmutes tracks during the recording, and automatically names the take afterward.



In Pro Tools, select the dialogue line you want to replace and press F4 to spot (cue) it.



Fill in the details of the line you're rerecording so you can keep track of all your work.



ADRStudio prompts the actor with beeps and a visual countdown before it signals Pro Tools to start recording.

After recording the replacement dialogue, Skywalker Sound's ADR editors used Pro Tools to cut the dialogue, move syllables around, and tweak the timing to make it match lips perfectly. For computer-generated characters like Watto, Jar Jar Binks, and *Episode II*'s new character, Dexter Jettster (a substantial, beer-bellied, four-armed, lizard-faced diner owner and informant on Coruscant), Wood recorded the dialogue ahead of time and gave it to ILM (Industrial Light + Magic, Lucas's 3D-animation and special-effects company), which then built each character's mouth and lip movements around the dialogue.

The Mix

After Wood and his team finished syncing all of the movie's audio elements—dialogue, ADR, Foley, sound effects, and music—to their appropriate frames (a typical scene can involve more than 100 tracks of audio), they sent everything to Skywalker Sound's central machine room for mixing down (the process of compiling all the individual sound work into the final 5.1-channel soundtrack).

"We have six Macs working for us on that at once," Wood says. Because George Lucas and his team would add and edit scenes at the last minute, Wood had to keep constant tabs on the movie's ever-changing cuts and make sure the appropriate sound editors had the latest version of the movie, right down to its final mix.

And Now?

No, Wood is not working on *Episode III* just yet. Instead, he is currently updating Burt's system, setting up a complete Final Cut Pro HD (high-definition) editing system to cut sound to video, something he says traditionalist Burt has been quite open-minded to. "The Macintosh is a great tool because there are so many different things you can do with it," he says. "It's not so closed in; you can cut pictures, sound, browse the Web—everything on this machine. It's great."

So will he start the next *Star Wars* movie right away? He laughs. "No, I'm pretty tired. I need a vacation." ■



Who could've predicted that this 6-year-old kid (note the Star Wars tee) would grow up to become a Jedi sound master?

Senior Editor Kris Fong would like to take this opportunity to "fess up to breaking her mom's planter as a kid while engaged in a lightsaber duel with her brother. She'd also like to apologize to her cat, who received full blame (and punishment).



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DINOSAUR FOUND IN OFFICE Manager Eaten Alive



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Shelly Brisbin
Macworld Magazine



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PLUS:

The HotList

55 Select top-rated stuff from the past 6 months

Apple continues to make buyers of high-end stuff wish they had waited a month or two longer before shelling out cash for now-second-tier equipment. Cases in point: The new 800MHz PowerBook G4 blows the doors off its older sibs—especially in graphics performance—and the new 23-inch Cinema HD Display (shown here) is not only bigger than its 22-inch predecessor, it's also brighter and more color correct. In other news, Palm and Rio disappoint, GoLive and Retrospect continue to impress, Brother delivers a kick-ass laser printer, and PowerMail and Mailsmith provide alternatives to Mac OS X's Mail. Next month? Macromedia's Dreamweaver MX, Apple's DVD Studio Pro, a sweet new inkjet printer from Canon, and other nifty surprises.

—Niko Coucouvanis

MacAddict RATINGS



AWESOME

You'll be blown away.



GREAT

You'll be impressed.



SOLID

You'll be satisfied.



SO-SO

You'll be disappointed.



LOUSY

You'll be pissed off.



If we were shopping for this type of product, this is the one we'd buy.



Compatible with Mac OS 9.x or earlier.



Compatible with Mac OS X or earlier.

PowerBook G4 800MHz

HARDWARE

How do we love the new 800MHz PowerBook G4? Let us count the ways... Graphically, there's a lot in the new G4 PowerBook. A whopping 32MB of SDRAM on the ATI Mobility Radeon chip set primes the PowerBook to take full advantage of Mac OS X's Quartz Extreme graphics (see *Get Info*, p10) when OS 10.2 becomes available later this year. To bask in more of this beauty, you can crank the PowerBook's 15.2-inch TFT display up to 1,280-by-854-pixel resolution (versus the previous 1,152 by 768 maximum). If 22 or 23 inches is more your size, the TiBook has also sprouted a DVI port to which you can attach any of Apple's digital monitors, such as the new Cinema HD Display (*Reviews*, p40), via Apple's new DVI-to-ADC adapter (\$149).

Audiophiles are excited about another new port on the PowerBook's backside—a standard minijack for audio line in.

Under the hood, the PowerBook G4 also sports a new L3 cache—a full megabyte of DDR SDRAM, which lets the processor quickly access frequently used instructions and data. Yet more added speed comes from the 133MHz system bus, which takes full advantage of the PC133 RAM, shuttling data between the motherboard components at the same speed as in a G4 Power Mac.

The result of all this added muscle is quite impressive, especially compared to the



The PowerBook G4 800MHz packs its sexy Titanium hull with more oomph than ever.

PHOTOGRAPHY BY MARK MADEO

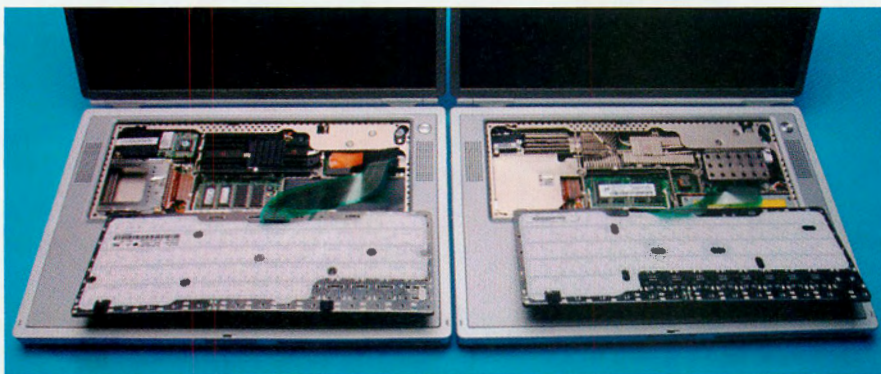
original 400MHz TiBook we used for testing (with 256MB of RAM and a meager 8MB of video RAM). Using the same 95MB image in Photoshop 7 and Mac OS X on both machines, we ran a couple of tests. A 2-pixel Gaussian blur took 41.6 seconds on the older PowerBook, but a mere 14 seconds on the 800MHz model. Rotating the same image by two degrees yielded a surprise—the double-MHz PowerBook was only about 65 percent faster (30.5 to 46.7 seconds). We started to wonder if megahertz really mattered. To redeem our faith in brute force, we ran the Quake III: Arena time demo on the new and old PowerBooks and were duly rewarded with 85.6 and 36.8 frames per second, respectively. This wasn't the massive increase we greedily anticipated from the new PowerBook's much more powerful video subsystem, but it was nothing to sneeze at.

Another less desirable result of the PowerBook's brawn is that it runs pretty hot—about as hot as the 400MHz model. Thankfully, it's not twice as hot, and when the fans do come on, they're a bit quieter than the older models'. Limited AirPort range is the only other legitimate technical complaint we have with the PowerBook G4 family; Apple won't tell us why, but the revised TiBook can wander farther from the AirPort Base Station (perhaps due to improved antennae). Indoors, we got about 100 feet away from the Base Station (with various walls in between) before losing the signal; outside (with the Base Station near a window inside), we managed a range of 150 feet. In both cases, our AirPort-equipped iBook still had a slightly better range.

Apple also fixed a couple of little things on the keyboard, finally moving the Enter key one over from its traditional spot at the spacebar's right flank—in its place is a second Command key. Also, the F7 key now toggles display mirroring and spanning if you've got an external monitor attached. This brings up another video trick: you can close the lid, plug in a USB keyboard, and devote the entire 32MB of video RAM to an external display.

Unless you're blessed with a top-of-the-line Power Mac G4, this baby can easily serve as a desktop replacement. If you do venture out with TiBook in tow, bring a stick—you wouldn't want to scratch your PowerBook as you beat back the swarms of ogles drawn to this stunning piece of hardware.

—Niko Coucouvanis



A fortified heat-dissipation system keeps the twice-as-powerful 800MHz TiBook (right) from running twice as hot as the 400MHz model (left).

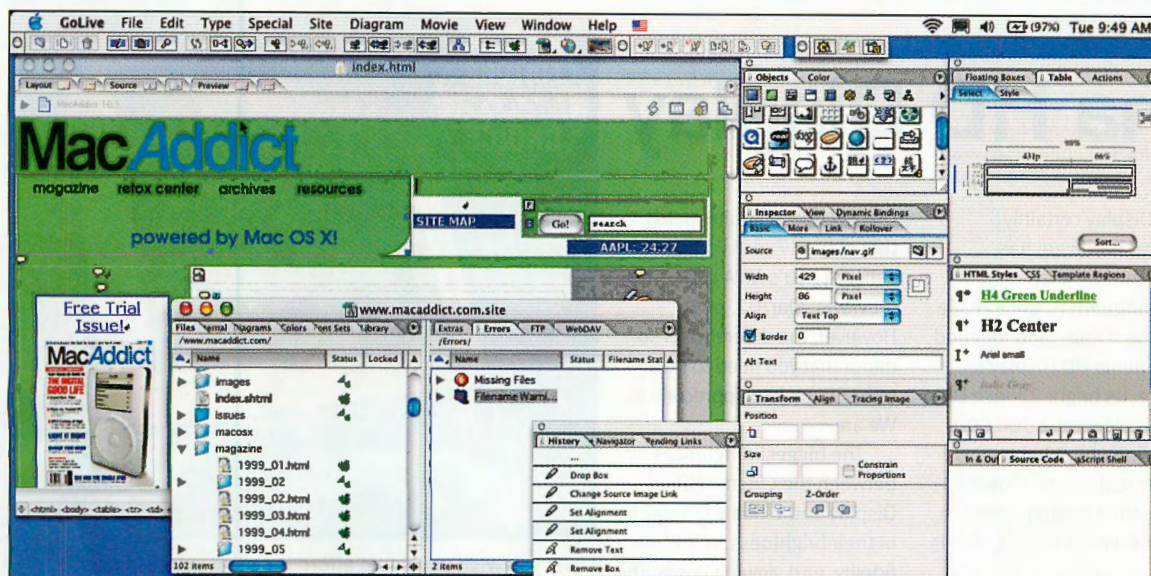
COMPANY: Apple
CONTACT: 800-692-7753 or 408-996-1010, www.apple.com
PRICE: \$3,199 (SRP)

SPECIFICATIONS: 800MHz G4 processor with 1MB of L3 cache, 256K of L2 cache, 512MB of PC133 SDRAM (1GB max), 40GB Ultra ATA/66 hard disk, ATI Mobility Radeon 7500 4X AGP graphics with 32MB of DDR SDRAM, S-Video and DVI out, 10/100/1,000 Base-T Ethernet, 56-Kbps modem, AirPort card, 8X DVD-ROM/24X8X8 CD-RW Combo Drive

+ GOOD NEWS: Improved AirPort range. 32MB of video RAM. DVI out (DVI-to-VGA adapter included).

- BAD NEWS: Surface still scratches easily. Combo Drive burns CD-RW at just 8X. Apple doesn't give them away free.





GoLive 6 adds enough features (and palettes) to make the great GoLive vs. Dreamweaver debate more a battle of form than of substance.

GoLive 6.0

DESIGN & GRAPHICS

As GoLive enters its fifth year on the Web design scene, comparisons to Macromedia's Dreamweaver are inevitable. Both are highly capable programs, yet their users are strongly divided. Old-school designers who migrated to the Web from print design (that is, users of Adobe Photoshop and Quark's QuarkXPress) generally feel more at home in GoLive's familiar Adobe interface, while upstart whippersnappers who jumped right into Web design tend to prefer Dreamweaver's superior handling of code and its Property Inspector-driven interface.

With version 6.0, GoLive bridges most of the remaining gaps between it and Dreamweaver 4 (Dreamweaver MX shipped too late for us to rate the two programs head to head; tune in next month for the Dreamweaver review). Notable improvements include better handling of HTML tables; improved workgroup support; new language support (JSP, PHP, and MySQL database integration, with preconfigured servers included); greater respect for HTML (including an HTML code validator); and improved support for portable languages such as CHTML, WML, XML, and XHTML.

GoLive's main new feature is Mac OS X compatibility, and Adobe did a fine job of Aqua-fying the program (as well as beating Dreamweaver to the OS X

punch). Like other Adobe apps, GoLive wears the standard palette-heavy interface, and you can do with the palettes what you wish: merge them all into one tabbed megapalette; hide all, none, or some of them; or tuck them behind handy tabs at the edge of your screen (any edge, as long as it's not housing the Dock or skirting the chasm between dual monitors). But the best way to manage the palette sprawl is to save specific palette and toolbar setups as Workspaces, so you can have preconfigured work environments for different types of projects—say, one for coding Web apps and one for more visual, design-oriented work.

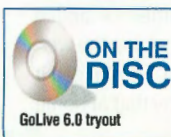
If you're a cog in the corporate crank, GoLive now includes Adobe Web Workgroup Server (AWWS) for team collaboration, and better WebDAV (Web Distributed Authoring and Versioning) support—so you won't kill your coworkers for overwriting your hard work (but you're still on your own when the boss tells you to change everything at the last minute). What's extracool about this feature is that users of other WebDAV-aware software—such as Dreamweaver—can access AWWS.

In another catch-up move, Adobe finally blessed GoLive with a user-extensible architecture, so advanced users can teach the app new tricks (JavaScript Actions, Extensions, Templates, and the like), and share the code with less advanced users via Adobe's Xchange Web site (www.adobexchange.com). A word of

warning: If you're already lost in GoLive's sea of icons, know that adding any of the above-mentioned tricks will bring yet more icons into the fray.

If you're just looking to make pretty Web pages without learning complicated technologies like HTML and JavaScript, GoLive still employs a layout style that, while it produces enough extraneous, bloated code to send an HTML purist into convulsions, lets you build your site visually—from the site structure, to basic page layout, to light-up rollover graphics and other interactive ornamentation. Even if the code is inefficient, you can keep it compliant; GoLive's Syntax Check highlights incompatibilities between your code and a variety of standards, including HTML 3.2 and 4.0, as well as browser-specific subsets supported by various versions of Internet Explorer and Netscape Web browsers.

Everyone wants to know which program is better. GoLive still can't touch Dreamweaver's aptitude with raw code, and GoLive still floods the workspace with copious palettes filled with superfluous icons. Adobe did finally add a Hints palette, which, as you might guess, provides useful hints about any icon you roll the cursor over. Being code purists from way back, we still prefer Dreamweaver, but if you're sold on Adobe's uniform interface, GoLive will fit intuitively into your routine.—Niko Coucouvanis



COMPANY: Adobe
CONTACT: 800-833-6687 or 408-536-6000, www.adobe.com
PRICE: \$399 (SRP), \$99 upgrade

REQUIREMENTS: Power Mac, Mac OS 9.1 or 10.1 or later, 96MB of RAM

+ GOOD NEWS: Better table support. Better code handling. New and improved workgroup-collaboration tools.
- BAD NEWS: Still clunky. Still overloaded with ambiguous icons. Still writes bloated code.



Cinema HD Display

HARDWARE

Apple's Cinema HD Display certainly attracts attention. No hardware has elicited more oohs and ahhs here at *MacAddict's* galactic headquarters since Leslie showed off her engagement ring—and for good reason. The all-digital Cinema HD Display's specs are mind-boggling: Its bright 23-inch LCD can display 16,777,216 colors on 2,304,000 pixels at a native resolution of 1,920 by 1,200—that's the screen real estate of over 13 original Macs, and more than enough pixels to display high-definition television (HDTV). This is one awesome display.

To fully appreciate the improvements that the Cinema HD Display has attained over Apple's earlier—and not-too-shabby—22-inch Cinema Display, we set them up side by side and ran them through a battery of tests.

Their performance with digital video (DV) is just about equal. Both the Cinema HD Display and the Cinema Display have pixel-refresh rates snappy enough to respond adequately to fast-moving DV. To our eyes, however, the pixel-refresh speed of the TFT LCD Cinema HD

Display doesn't quite match that of the 17-inch Formac gallery 1740's MVA LCD (Reviews, Mar/02, p49). However, the difference is so minor that you need to be a true LCD geek to appreciate it. We are.

The biggest differences between the Cinema HD Display and Cinema Display lie in their brightness, color fidelity, and viewing angle. The new display is noticeably brighter and more color consistent across the full screen. What's more, its color consistency when viewed from an angle—a standard bugaboo of LCD displays—is far better than that of its earlier (and a thousand bucks less expensive) counterpart, especially when your viewing angle shifts vertically rather than horizontally.

As impressive as it is, the Cinema HD Display isn't perfect. When displaying very dark



PHOTOGRAPH BY MARK MADEO

Don't you wish you could afford the most astonishingly gorgeous display on the planet?

images, its backlight bleeds faintly through the image (unlike the earlier Cinema Display, on which black is black, and not deep blue). When displaying very bright images, the Cinema HD Display's backlight is oh-so-slightly uneven around the left and right edges of the display. These are minor problems, but noticeable.

Oh, and there's one last problem. It costs \$500 more than a Dual 1GHz Power Mac G4. Wouldn't it be fun to be rich?—*Rik Myslewski*



COMPANY: Apple
CONTACT: 800-692-7753,
www.apple.com
PRICE: \$3,499 (SRP)

REQUIREMENTS: Power Mac
G4 with ADC port, or PowerBook
G4 with DVI-to-ADC adapter.

+ GOOD NEWS: Huge. Bright. Sharp. Fast. High resolution. Ridiculously simple to set up and use.
- BAD NEWS: Costs more than a week's stay at New York's Ritz Carlton (including room service). Minor backlight bleed-through in very dark images.



KeyDrive USB

HARDWARE

When we first saw mini Flash-memory USB devices hit the market, we weren't terribly impressed. USB is slow, Flash memory is slower, and, adding insult to injury, the devices hit the market at prices well over \$2 per megabyte. For comparison, portable FireWire drives currently run around a dime per MB; even RAM hasn't commanded such a premium since the early nineties.

Welcome to the future. Flash memory is getting cheaper all the time, and the \$69, 64MB KeyDrive we reviewed lowers the price bar almost to the \$1 per megabyte level; we wouldn't be surprised to see this device—or a competitor's—selling well below \$1 per meg by the time you read this.

Besides being the cheapest device of its kind that we've seen, the KeyDrive has at least one feature that sets it apart from other USB minidrives: a tiny switch you can use to switch write protection on and off. From a security standpoint, it works well—almost too well. We received our KeyDrive with its write-protect mode turned on, and the dang switch is so small that we didn't notice for two full days (the lack of documentation on this feature didn't help). Another nice touch is the included 3-foot USB extender cord, which makes it much easier to use the drive if your only free USB ports are on



Another iteration of the 21st-century floppy; this one even has a write-protection switch.

the back of a tower that sits on the floor. Our favorite thing about Flash drives is their durability; during a pickup game of office badminton, our KeyDrive shuttlecock landed in the dog's water bowl. After giving the wet KeyDrive sufficient time to dry, we plugged it in, and it worked—but don't try that at home. —*Niko Coucouvanis*

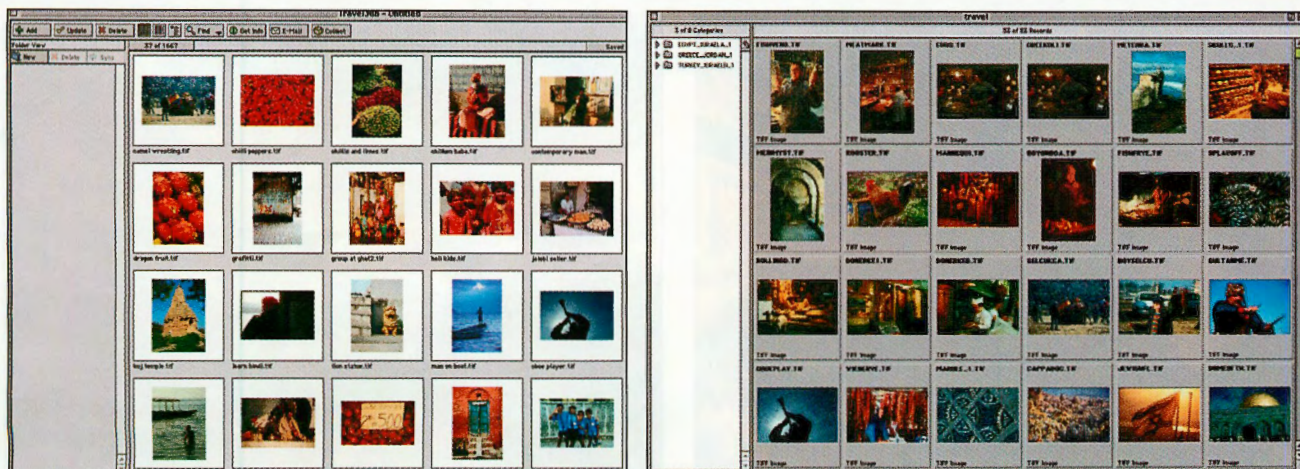


COMPANY: Computech International
CONTACT: 909-923-0068,
www.computechintl.com
PRICE: \$69 (SRP)

REQUIREMENTS: USB-equipped
Mac, Mac OS 8.6 or later

+ GOOD NEWS: Small and durable. Groovy design. USB extension cord included.
- BAD NEWS: Slow data transfer.





Portfolio (left) and Cumulus (right) are not particularly sexy, but these asset management tools are crucial if you traffic in digital media.

Portfolio 6 vs. Cumulus 5.5

PRODUCTIVITY

For professional photographers, graphic designers, and illustrators alike, asset management is key to running a successful business. Canto Cumulus and Extensis Portfolio excel in cataloging digital files, such as images, layouts, and audio and video clips. They also incorporate sophisticated indexing and searching functions, so you can easily find your files later on a CD, tape, hard drive, or wherever you stashed them.

So how are they different, you ask? For starters, Cumulus retails for \$99—half of Portfolio's \$199 price tag. Not bad, considering that you get many of the same whistles and



bangs Portfolio provides. Both programs allow you to add keywords and descriptions to digital files as you catalog them. However, Portfolio's

interface makes it easier to add tag files by batch, rather than individually.

Both programs can create a slide show from a collection of images, but only Cumulus lets you attach an AIFF or WAV soundtrack. Better yet, in Cumulus you can record audio annotations for individual files.

Cumulus's capacity for IPTC (International Press Telecommunications Council) data is more complex than Portfolio's. IPTC is an industry standard for appending images with information such as a credit, copyright, caption, and byline as well as the file's date, status, and location.

For that extra \$100, Portfolio incorporates a few advanced features that allow you to do more than just manage files. A key advantage is Portfolio's new batch-renaming function, which renames files on the fly as Portfolio catalogs them. This is a huge time-saver,

especially when you're cataloging images from a digital camera, which gives shots undescriptive sequential numbering.

Portfolio's other big advantage is its advanced Web-publishing feature. Even the single user version comes with several well-designed templates for creating snazzy Web pages in a jiffy. Registered Portfolio 6 users can download a more sophisticated plug-in called PortWeb free from the company's site. This plug-in allows dynamic Web publishing so clients can view changes to your Portfolio catalog in real time over the Web.

The single-user version of Cumulus can output to HTML, but the pages are plain and static. To take advantage of dynamic Web publishing, you need to pony up for Canto's Web Publisher at a cost of \$495.

If you are looking for a solid asset-management program without many frills and you might like to send out musical slide shows of your images, then Canto Cumulus is a perfect fit. However, if you're more interested in dynamic Web publishing than in multimedia slide shows, check out Extensis Portfolio. Its ability to add custom keywords to a batch of files is also important, and well worth the extra \$100 if you take a lot of digital photos.

—Leigh Webber

Groupware

Cumulus and Portfolio both offer server-based enterprise versions. The Canto Cumulus Workgroup edition and the Extensis Portfolio Server edition both allow a group of 10 to 20 people to access a central catalog of files. Both products come with software for establishing a server, which can dole out access privileges, as well as client software for accessing the files. The client software runs across platforms and allows Internet-connected Mac OS, Windows, and Unix clients to access the same assets via TCP/IP from anywhere in the world.

Portfolio 6

COMPANY: Extensis
CONTACT: 800-796-9798,
www.extensis.com
PRICE: \$199 (SRP)

REQUIREMENTS: Power Mac, Mac OS 8.6–9.x

+ GOOD NEWS: Publishes catalogs to dynamic Web sites instantly. Lets you rename, copy, and/or move digital files on the fly. Great automatic keyword system.
– BAD NEWS: Costs twice as much as Cumulus. Doesn't allow addition of sound or annotations to slide shows.



Cumulus 5.5

COMPANY: Canto
CONTACT: 415-703-9800,
www.canto.com
PRICE: \$99.95 (SRP)

REQUIREMENTS: Power Mac, Mac OS 8.6 or 10.0.4 or higher

+ GOOD NEWS: Very affordable. Can add sound to your slide shows. Enhanced IPTC feature.
– BAD NEWS: Limited keyword system. Creates static Web pages.





EDITORS'
MacAddict
CHOICE



Zombie Nazis and killer graphics make *Return to Castle Wolfenstein* a consummate gamer's game.

Return to Castle Wolfenstein

FUN & GAMES

This killer game is really two games in one. The first is a single-player adventure through a Nazi stronghold filled with violence, mythos, and mystery. The second is a multiplayer romp using World War II hardware, one that fans of *Saving Private Ryan* will enjoy tremendously. They're both great.

The game's premise is simple. You're an American soldier who has escaped from a cell in the mysterious and eponymous Castle Wolfenstein. At first your exploration reveals what you might expect—loads of Nazis. But as you progress through the game (using the save feature a lot, if you're smart), you find that unusual Nazi experiments have tainted the castle with a supernatural tinge. The sudden-shock gameplay and cut scenes make these eerie phenomena readily apparent.

Graphically, if your system is up to it, *Wolfenstein* brings a lot of rewards using the powerful Quake III engine. Cleverly designed and well-animated creatures, both natural and supernatural, populate its very detailed architecture. Texture work is immaculate, with convincing environments, indoors and outside. The initially confining castle environs open out into much more ambitious levels.

As you move through the game, you'll assemble quite an arsenal of weapons, from simple Luger pistols to volumetric and pyrotechnically impressive flamethrowers. Ballistically accurate hand grenades back up

the point-and-shoot weapons nicely. Tossing a grenade around a corner and then ducking to safety is tremendously satisfying.

The single-player game can be tough, but perseverance is all that's really required to finish it. We'd argue, however, that you'll never quite finish the multiplayer game, developed independently by a company called Vibe, because the possibilities are nearly endless.

Multiplayer mode lacks zombies, concentrating instead on regular war stuff (like strategy). You choose to fight with either the Axis or the Allied side, picking from a number of player classes, including medics and engineers. While the latter classes can fight, their real job is to help the soldiers and lieutenants by curing fallen (even dead)



He's a Nazi, and possibly undead, so it's totally OK to kill him.

comrades or blowing up walls. You can, of course, be a lieutenant or a soldier and attack in a more gung-ho fashion, but the introduction of true character classes adds acres of strategy.

While standard team-based games leave you in boredom as you guard a base or flag, in multiplayer *Wolfenstein* you get to man static-mounted machine guns, hide in ventilation shafts, and defuse explosives, among many other things.

If the game has failings aside from its hefty system requirements, they lie in its irritating, molasses-slow, counterintuitive interface, which has the sadly typical multitiered user-option screens; also, the single-player version has some occasional slow parts. Otherwise, it's great value and great fun. —Frank O'Connor

D-Day Redux

If you really enjoy WWII stuff, you'll be excited to learn that the ever-vigilant Aspyr has also picked up the Mac rights to Electronic Arts' incredible *Medal of Honor: Allied Assault*, which many consider the ultimate World War II action game. Like *Wolfenstein*, it uses the Quake III engine but focuses very intensely on historical accuracy, with beach assaults, authentic aircraft, and ships. The game is due to ship sometime this year, but with Aspyr, that means whenever it's done right.



COMPANY: Aspyr
CONTACT: 888-212-7797 or
512-708-8100, www.aspyr.com
PRICE: \$49.95

REQUIREMENTS: 500MHz G3, Mac OS
9.2 (with virtual memory active) or 10.1 or later,
128MB of RAM (256MB in Mac OS X),
hardware graphics acceleration

+ GOOD NEWS: Huge challenge. Lots of variety.
Great online multiplayer modes.
- BAD NEWS: We hope you have a very new, very
fancy Macintosh.

MacAddict RATED
GREAT

E-20N

HARDWARE

Looking for a high-res camera for shooting stuff on autopilot? You might want to consider a different camera. That said, if you're a photography buff who knows a thing or two about working manual controls, the Olympus E-20N will reward you with beautiful, clean images right out of the camera.

The E-20N is a solidly built SLR geared toward pros, and has mostly the same feature set as its predecessor, the 4-megapixel E-10. Its aluminum body is substantial but rests comfortably in the hand, and features an effective 4.95-megapixel maximum resolution (2,560 by 1,920 pixels); a beefy, fixed 4x optical lens with a zoom ring; support for CompactFlash, SmartMedia, and Microdrive; support for JPEG, RAW, and TIFF formats; a tilt-out LCD monitor; an optical viewfinder; time-lapse mode; and all the doodads you'd expect in a high-end digital camera.

We found this camera very easy to work with, in part because it displays current settings in the viewfinder. We also liked the zoom and manual focus rings assembled around the lens barrel—right where they should be. With the focus ring, we fine-tuned our subjects without having to guesstimate in terms of feet or meters as with other cameras.

Performance-wise, the E-20N produces outstanding images with true color and great depth-of-field control. We do have a few caveats; our biggest gripe is its maximum 1/640 of a second shutter speed in the 5-megapixel Interlace Scan mode. Outdoors, we had to shoot at small apertures if we wanted



PHOTOGRAPH BY MARK MADEO

It's hardly idiot friendly, but if you know what you're doing, the E-20N will reward your efforts with excellent output.

high-res images exposed correctly. For faster shutter speeds—up to 1/18,000 of a second—you must use Progressive Scan mode, which cuts the image resolution in half. Though 2.5 megapixels is fine for newspaper and online journalism, magazine and advertising folks will want all 5 megapixels and faster shutter speeds (at least 1/1,000) to handle action and artistic compositions outdoors.

Shots taken in full auto mode tended to exhibit blown-out highlights and skies, though we have proof that the camera is capable of producing good shots during those lazier point-and-shoot moments. We also experienced some abnormal color bleeding; in some of our nature shots where plants and trees filled the composition, squirrels came out green with envy and cheerful orange flowers appeared jaundiced.

However, when we commanded full control, the color weirdnesses disappeared and the camera's handling of some tricky exposures pleased us. In low light, the camera exposed scenes well, though it treated us to an ad hoc performance of "Bring In Da Noise, Bring In Da Funk" even with noise reduction enabled, but much less so than other cameras. Studio shots exhibited excellent color gradation, but some of our outdoor images didn't have as much shadow detail as we'd like.

Overall, the E-20N is a great camera that can produce gorgeous pics under controlled lighting, and great outdoor images if you're willing to work the controls. But it's not for the lazy photographer.—Kris Fong



PHOTOGRAPH BY KRIS FONG

The autofocus refused to focus on this shot from 2 feet away. Thankfully, the manual focus ring allowed us to fine-tune our view.



PHOTOGRAPH BY KRIS FONG

With a little effort, the E-20N can produce gorgeous images straight from the camera, like this photo shot in mottled sunlight.



PHOTOGRAPH BY MARK MADEO

The E-20's 4x optical zoom lens means business.

COMPANY: Olympus
CONTACT: 631-844-5000,
www.olympusamerica.com
PRICE: \$1,999 (SRP)

REQUIREMENTS: Power Mac with built-in USB, Mac OS 9.x or later (OS X requires a compatible media-card reader)

+ GOOD NEWS: Produces beautiful, immaculate images. Manual-focus ring. Good depth-of-field performance.

- BAD NEWS: High-res mode maxes out at 1/640 shutter speed. Autofocus can be problematic. Some color bleeding.



Treo 180

HARDWARE

You're obsessed with technology.

You can sympathize with gadget overload. You've got your PDA in one pocket, your cell phone in another, and every time someone sends you their contact info, you've got to amend the number in your handheld and then do the same in your cell phone. If this is your life and you're not happy with it, you need the Handspring Treo.

When you enter a contact, the information appears in your phone list, from which you can directly dial.

The Treo is a cell phone, PDA, SMS (Short Message Service) text-messaging device, and Internet-surfing machine in one compact package. But that's not all. Handspring also managed to squeeze a tiny QWERTY keyboard onto the device, thus alleviating the pain of entering addresses and notes via Graffiti. (For those of you with insane Graffiti talents, there's a version of the Treo without a keyboard.)

Although the Treo is not as small as many cell phones, it is unobtrusive and fairly compact. The lid flips open and acts as your earpiece, but feels somewhat cheap and flimsy. The device also comes with an

earpiece that allows you to use your Treo in hands-free mode—for all of you naughty people who talk and drive simultaneously.

The best part is the interface. The Treo runs the Palm OS and has all of the functionality of a Palm device (although it doesn't have an expansion slot). On top of that, the Treo leverages a traditional PDA's capabilities to make cell-phone calls much easier. For instance, when you enter a contact, the information appears in your phone list, from which you can directly dial. You can also add contacts to your speed-dial list, which holds the phone numbers of 50 of your closest friends. If you want to find someone fast, start typing the name on your keyboard—the Treo will find the phone number for you in a jiffy. Or just dial straight from the keyboard or using the onscreen dial pad.

One unfortunate but not insurmountable problem is that the Treo ships only with the Mac OS 9 version of Palm Desktop, which you must use to configure the device. After you enter all of your settings, you can grab Palm Desktop for Mac OS X from Palm's Web site (www.palm.com) and HotSync natively in OS X. Handspring warns that it does not officially support this procedure, but when has that stopped us before?

The Treo limits you to a GSM (Global System for Mobile communication) service plan, and Handspring offers a \$200 discount on the Treo if you sign up for one year with either Cingular or VoiceStream. The time you spend on the Internet simply cuts into the number of minutes you have on your plan.

But don't be fooled: The Treo doesn't work like a wireless Internet device such as the Palm i705 (see *Reviews*, p50). In fact, we were unable to send email from our POP3 account (although we could receive it) because Cingular did not have an SMTP server as of press time (pretty lame), and



PHOTOGRAPHY BY MARK MADEO

The Handspring Treo offers a killer trio of options: cell phone, PDA, and Internet.

Just Add Color

If you look at the Treo and say, "If only it had a color screen," you're in luck: The Treo 270 should be available by the time you read this, packing all the 180's features, plus a 12-bit color display and backlit keyboard. And if you want color but no phone, there's a Treo for you, too: the Treo 90, which Handspring claims is the smallest color-screen, Palm OS-powered PDA available.

most ISPs will not allow requests from outside sources through their SMTP servers. There are workarounds, though, such as using a third-party dial-up account for all of your email needs (in fact, that's how VoiceStream works).

Even with a few drawbacks, the bottom line is that the Handspring Treo offers the best of both worlds and does so in a user- and Mac-friendly way. And if it means we can empty at least one of our pockets, we're happy.—Cathy Lu



The Treo's QWERTY keyboard: Sure, it's cute, but don't expect to bang out 80 words per minute.



COMPANY: Handspring
CONTACT: 888-565-9393 or
650-230-5000, www.handspring.com
PRICE: \$399 with service, \$599 without

REQUIREMENTS: Power Mac with a USB port, Mac OS 8.5 or later (Palm Desktop for Mac OS X available on the Web)

+ GOOD NEWS: Handles phone calls, contacts, and Internet. Nice software interface. Innovative.

- BAD NEWS: Flip lid feels flimsy. Email technology can be problematic. Doesn't support Mac OS X out of the box.

MacAddict RATED

GREAT

Brother HL-1870N

HARDWARE

Although the latest advancements in inkjet technology may make laser printers seem like a secondary option, if you work in a small or home office, you probably still need a laser-printer workhorse to handle your high volume of documents. The Brother HL-1870N monochrome laser is just that kind of printer. It's not a particularly pretty machine, but it outputs high-quality prints at a fast clip—and for a reasonable price.

The 1870N measures 16.7 inches wide by 16.7 inches deep by 10.8 inches high, and while it's not the smallest laser printer we've seen, it's still sized for a desktop. It features a 100MHz processor, 32MB of memory (upgradable to 144MB), a maximum resolution of 1,200 dpi, a 250-sheet paper tray, and a 100-sheet adjustable manual-feed tray. The LCD display is easy to navigate, and unlike laser printers of yesteryear, this one is very quiet.

Setting up the printer is easy. Just pop in the bundled CD and follow the directions for setting up the hardware and installing Brother's PPD files. Mac OS X drivers are on the



PHOTOGRAPH BY MARK MADEO

This printer will give you high-quality prints, but you'll have to buy the USB cable first.

disc, so you don't have to download anything from the Web. Unfortunately, our pet peeve reared its ugly head: There's no USB cable in the box. The box top does warn you of the omission, but you've got about a 30 percent chance of spotting that text before you actually leave the store. Setting up this printer for network printing via its onboard 10/100 Base-T Ethernet port is nearly a plug-and-play operation: In both Mac OS 9 and Mac OS X, we had the 1870N up on our Ethernet network in minutes.

The printer's quality and speed impressed us. When printing standard word documents at 300 and 600 dpi, we achieved the advertised 19 ppm (pages per minute) and small text appeared crisp. At 1,200 dpi, our speeds fell to about 16 ppm—no biggie. We were pleased with the image quality at the higher 600- and 1,200-dpi settings. At 1,200 dpi, image outlines were crisp, gradients blended well, and there was good detail in the shadows.

This printer supports PostScript Level III printing via emulation, and we printed PostScript images and fonts with no problem. Add in the 32MB of internal memory, and this printer was able to spit out some fairly hefty *MacAddict* magazine pages designed in QuarkXPress, including a 62MB cover image and a six-page feature article. (Of course, we had time to make a snack in the office kitchen during the latter test.)

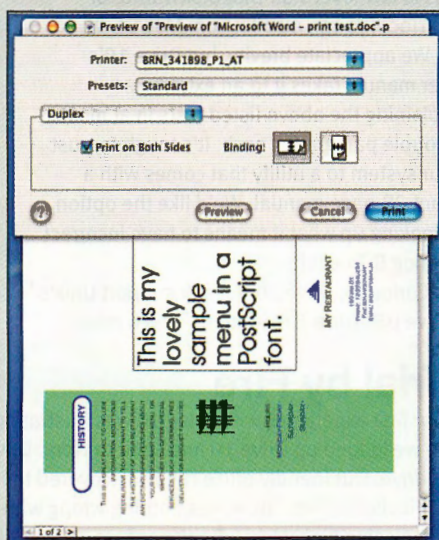
The 1870N works well with Mac OS X, although we found that print times were slower than with Mac OS 9. For example, in Mac OS 9.2, we printed a Web page in 20 seconds over the Ethernet network. In Mac OS 10.1.3, the same page took over a minute to print.

You'll find cheaper laser printers out there—such as the Samsung ML-1210 (*Reviews*, Jun/02, p53). However, the 1870N can print faster and comes with a significantly higher allotment of memory. For small offices, those bonuses might be worth the extra dollars.—Narasu Rebbapragada

One Is the Loneliest Number

Are you shunned by tree huggers in the office because you throw away so many single-sided prints each day? Luckily, Brother's PPD adds double-sided printing to your Mac's print options. In Mac OS 9 and earlier, choose Layout from the Print Options menu and then check the Print On Both Sides box. In Mac OS X, duplex printing shows up as an option in the Print Options menu within the Print dialog box. Choose a landscape or portrait page orientation, and you're on your way to more environment-friendly printing. If you're still not making friends at the water cooler, you might want to look into organic breath mints.

Choose Duplex from the Mac OS X Print dialog box for double-sided printing.



COMPANY: Brother International Corporation
CONTACT: 908-704-1700,
www.brother.com
PRICE: \$699 (SRP)

REQUIREMENTS: G3 or faster,
 Mac OS 8.5–9.2 or 10.1 or later, 64MB
 of RAM, USB port

+ GOOD NEWS: Fast. Creates good-quality prints.
– BAD NEWS: Pricier than other home-office laser printers.





Drive 10 looks great and runs natively in Mac OS X, but actually does less for your OS X system than many non-Carbonized utilities.

Drive 10 1.0.5

UTILITIES

We've always been fans of Micromat's TechTool Pro, so we were excited about the release of Drive 10, the first Mac OS X-native disk utility. If you're in our boat, here's the first thing you should know: This is *not* an OS X version of TechTool Pro—Drive 10 is strictly a hard disk utility. Micromat says it's an interim solution until the company Carbonizes TechTool Pro.

Drive 10 does what it says it does; unfortunately, that ain't much.

The fact is, if you keep up with TechTool Pro updates (currently at 3.0.6), Drive 10 is 99 percent redundant: TechTool Pro can actually do more for an OS X system than Drive 10 can. For example, TechTool can optimize the drive by defragmenting noncontiguous data; since neither utility can perform repairs on the disk that contains your active system, you have to boot from a different drive or from the product CD in either case. You can, however, run Drive 10's full suite of tests from the hard drive on which you've installed it, to find out if you need to reboot from the CD and make repairs.

Most of Drive 10's test routines are straight out of TechTool Pro. The full list of tests reads: Unit Ready, Supply Voltage, Self-

Diagnostic, Rezero Unit, Format Check, Spare Sectors, Seek, Surface Scan, Random Read, Random Write, Linear Read, Linear Write, Read Buffer, Write Buffer, and Volume Structure (the latter checks the Volume Header, Extents File, Catalog File, Attributes File, Startup File, and Allocation File). We ran the full suite on a Mac OS X system that didn't *seem* to have any problems, but Drive 10 found and fixed some accounting errors in the Catalog and Extents B-Tree information. This is low-level stuff that DiskWarrior or TechTool Pro can also fix from Mac OS 9.

We appreciate brevity, but Drive 10's user manual takes it to an extreme, explaining the above-listed tests in at most a couple paragraphs each. It's tough to trust your system to a utility that comes with a scant 28-page manual. We'd like the option of looking up what it means to have incorrect Catalog B-Tree information.

Curiously, Drive 10 doesn't support Unix's native UFS (Unix File System), which most

Mac users probably don't use or care about anyway, but the Mac OS X installer offers the option of formatting your disk in UFS format. If you opt for UFS, we can only assume that you also know about fsck (file system check), a command-line utility built into Mac OS X's Unix core.

So is this product worth \$69.95 of your hard-earned dollars? That all depends; if you've got current versions of TechTool Pro or DiskWarrior, you don't need Drive 10. If you want an OS X-native disk utility on principle or for its sexy Aqua look, get Drive 10—but keep other, fuller-featured utilities handy, just in case. And if you just want to stay on the cutting edge, know this: Both Mac OS X and Drive 10 have been through no fewer than four minor upgrades; once you buy the Drive 10 CD, upgrading the app requires burning a new bootable CD, which isn't trivial (find detailed instructions at Micromat's Web site). Drive 10 does what it says it does; unfortunately, that ain't much.—*Niko Coucouvanis*

Trial by Fire

Our first experience with Drive 10 was frustrating. Our trusty iBook booted in a kernel panic, so we loaded up Drive 10 and set it to work. Drive 10 said the drive was fine—the key word is *drive*. Our friendly office IT guy discovered the real problem: We were missing one of OS X's invisible files. There was nothing wrong with the drive itself, but Drive 10 doesn't check for missing files. Moral: Don't confuse a disk utility with a system utility.

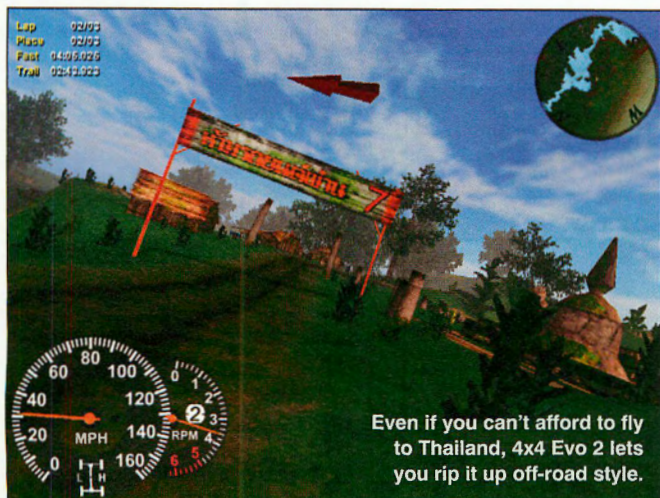


COMPANY: Micromat
CONTACT: 800-829-6227 or 707-566-3831, www.micromat.com
PRICE: \$69.95 (SRP)

REQUIREMENTS: Power Mac G3, Mac OS X, 64MB of RAM, bootable optical drive (CD-ROM).

+ GOOD NEWS: Might get you out of a jam someday. OS X native.
- BAD NEWS: "OS X native" doesn't mean much. Redundant with other utilities. No UFS support.





Even if you can't afford to fly to Thailand, 4x4 Evo 2 lets you rip it up off-road style.



Ah...just me, my GMC truck, and nature. Does it get any better than this?

4x4 Evolution 2

FUN & GAMES

First things first. If you do not have at least a 450MHz Mac with approximately 800MB of free disk space, stop reading. Now, to the half of you who are still with us: Congratulations. Not only do you have a kick-ass Mac, but you also have the goods to play 4x4 Evolution 2, a physics-based, free-roaming driving game that will get your adrenaline pumping and your fists shaking in fits of virtual road rage.

If they design a real car like this, sign us up—we'll buy it.

4x4 Evo 2 is a true sequel to the original 4x4 Evolution (see *Reviews*, 3/01, p54), with updated vehicles, environments, and a new Mission mode that sends you off freestyle in pursuit of a goal, such as delivering supplies to



Watch out for tires, abandoned cars, and other wasteland objects in the salvage yard.

a town beleaguered by an earthquake. Mission mode is a nice timeout, but the real fun is in the racing. 4x4 Evo 2 has 32 different tracks on which to race, including exotic Thai greenery, dusty Arizona desert, and a construction zone wrought with obstacles and detours. You can play against an AI, friends and coworkers via a LAN, or random people on the Internet.

You can hop right in for some instant racing gratification, or opt for Career mode. In the latter, you start out with \$30,000 to buy a basic truck, like the GMC Sierra 1500 SL Extended Cab 2WD (which is a piece of crap, at least in the game), and earn money via the missions and participation in the racing circuit. With the money you earn, you can upgrade your vehicle with all kinds of parts, whether it's new tires or better brakes—or invest in a whole new rig, such as a hopped-up monster truck (for a mere \$750,000).

They say here in San Francisco that people start driving like idiots when it rains or when the fog rolls in. That's certainly true in 4x4, where you can opt to drive at dusk or in the fog or rain. Choose dense fog if you want to see what driving in limited visibility is all about. And welcome to our world.

Unfortunately, 4x4 has ridiculously high system requirements. We were able to run the game on a 350MHz G4, but it was a bumpy ride. Other than that, the game has a couple of teensy annoyances. First, there's the small issue that even when you run into, say, a telephone pole, your car doesn't suffer any damage. If they design a real car like that, sign

A Public Service Message

Operating a real-life vehicle immediately after playing 4x4 Evo 2 is not advised. Please practice safe game playing and driving.



After they played 4x4 Evo 2, the line between game driving and real driving became blurred for certain editors. Don't let this happen to you.

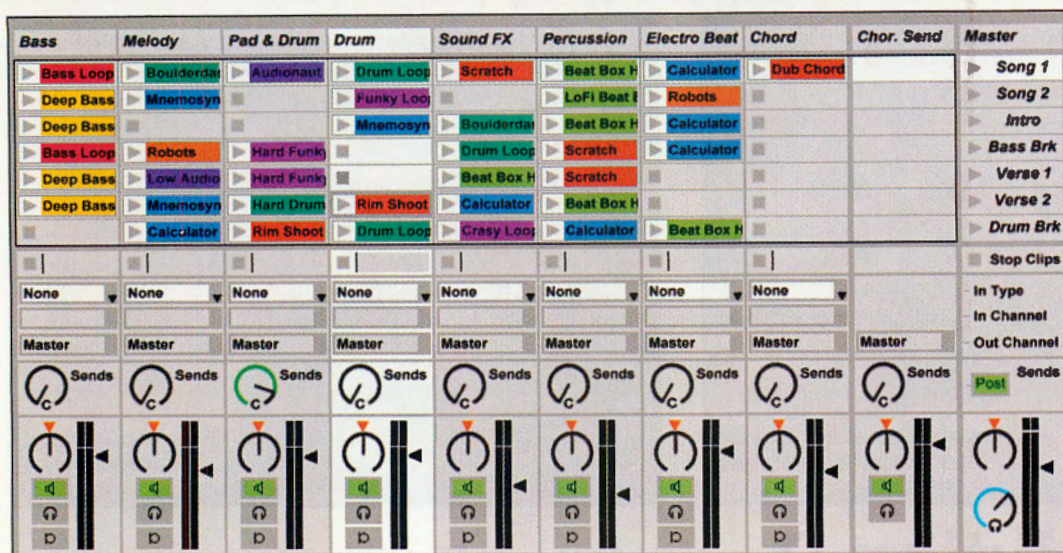
us—we'll buy it. Also, the game's default settings make for some annoying pop-in (the drawing in of objects as you approach them), although to alleviate the problem, you can up the level of detail if you have a newer Mac with a fast processor and a fat graphics card. But these are just nitpickings you'll soon forget once you're in the throes of a heated race through the mountains of Tibet.—Cathy Lu

COMPANY: Aspyr and Terminal Reality
CONTACT: 888-212-7797 or 512-708-8100, www.aspyr.com
PRICE: \$39.99 (SRP)

REQUIREMENTS: 450MHz G3 or faster, Mac OS 9.1 or later, 128MB of RAM, 785MB of free hard disk space, ATI Rage 128 or better graphics card

+ GOOD NEWS: Huge number of options of cars and tracks. Varying modes of play keep things interesting.
- BAD NEWS: Small annoyances like graphics pop-in and lack of vehicular damage.





Live's Session view is the equivalent of an analog mixer, with recordable faders and loop triggering.

Ableton Live 1.1

AUDIO

If you like music of the loopy variety, Ableton Live will make your inner child smile. Though geared toward live musical performance, Live shines equally bright when it comes to constructing dance and electronic music in the studio.

Neither a MIDI-sequencing nor a sample-editing package, Live is a new breed of tool for manipulating sampled audio. The program's name comes from its ability to apply a wide range of real-time effects, ranging from pitch and beat correction to esoteric delay and filtering effects, to looped, sampled audio as it plays.

One of the first neat tricks you'll encounter is automatic beat detection and matching. Load up a drum track with a 110-bpm (beats per minute) speed, and a bass line chugging away at 80 bpm, and Live automatically resynthesizes the two to match perfectly (giving you full control over which beat dominates). The quality of pitch changes is simply astounding, better than the results of

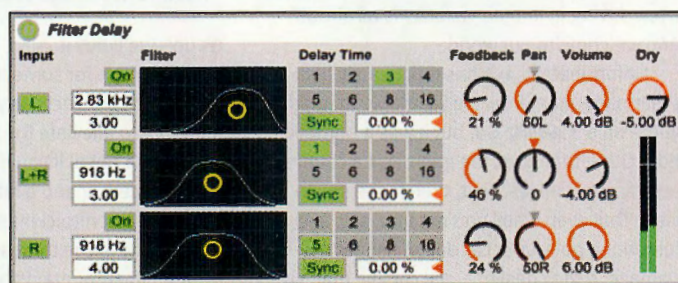
some dedicated pitch-shifting software (as we own a classic Eventide Harmonizer device, we know a bit about pitch-shifting esoterica). You load your clips in Live In Session mode, where you can assign keys and MIDI input (as well as mouse moves) to trigger specific clips. Though Live doesn't record or play MIDI music, it uses MIDI as a triggering method. We wish Live had some basic MIDI track support, but unless you own more than a MIDI controller keyboard, this probably won't bother you much.

Once you load your clips and assign their triggers, you switch to Arrangement mode, where you essentially record your triggering of clips. Extensive quantization options make it easy to synchronize multiple triggered soundtracks, and you can always stretch pitch and time manually to match the sounds in your head. You can easily rearrange clips in the timeline, and this is where the effects magic comes into play. The program offers the expected delay, chorus, and equalization features, which all work quite well (and in real

time to boot). It's the more exotic offerings that really shine, though. For example, the delightfully eccentric Grain Delay breaks up a sample using granular synthesis and applies different amounts of delay to the grains—hard to describe, but absolutely astounding to hear. Vinyl Distortion does a stellar job of emulating a scratchy, dust-covered record playing on a wobbly turntable, and Erosion is a downright nasty Trent Reznor-style bit decimator, perfect for going the low-fi route with any sound. You can stack multiple effects for layered mayhem. In addition to its built-in effects modules, Live supports effects in VST format (though not virtual instruments such as synthesizer simulations). Live also includes support for hosting ReWire-based applications, such as Reason and Rebirth.

Once you have a groovy, gratifying session all whipped up, you can record it onto disk as a simple stereo mix, though the process is a little cumbersome (you have to enable a track in the Arrangement window and set its input to Live Master Output). A simple Record Mix To Disk command would improve the otherwise amazingly clean interface, which doesn't befuddle you with layers of nested windows, instead presenting all functionality onscreen at all times. This is certainly one of the best-looking audio programs we've ever worked with. If you enjoy playing with audio loops, in or out of the studio, you're going to find a new life in Live.—David Biedny

Grab the effects-control spheres in the grids, and you can modulate and apply the effects with real-time previews.

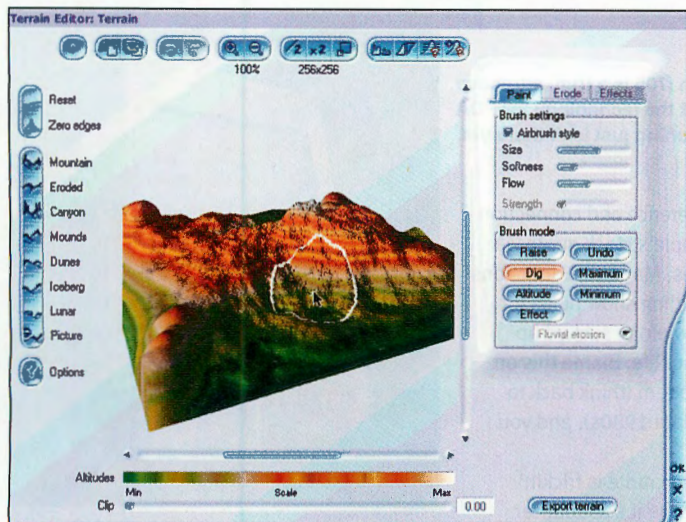


COMPANY: Ableton
(U.S. distributor Midiman)
CONTACT: 800-969-6434 or
626-445-2842, www.ableton.com or

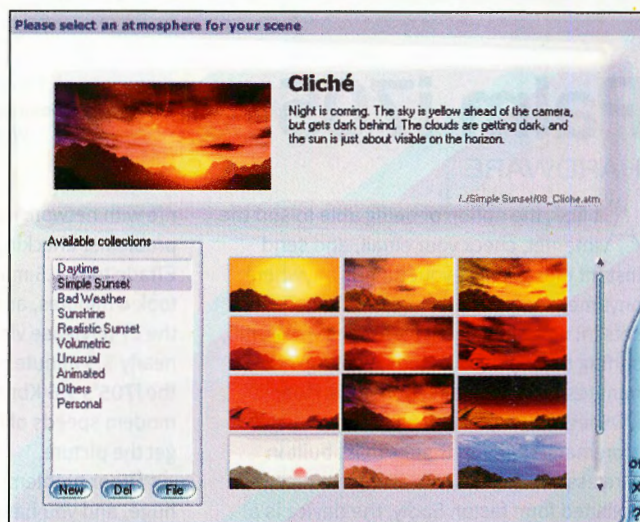
www.midiman.com
PRICE: \$349 (SRP), \$300 (street)
REQUIREMENTS: G3 or faster
Mac, Mac OS 8.6 or later, 128MB of RAM

+ GOOD NEWS: Slick time and pitch shifting. Automatic beat detection and matching. Cool delay and filter effects.
- BAD NEWS: No support for MIDI sequencing tracks. Recording the final mix is unnecessarily cumbersome.

MacAddict RATED
GREAT



Vue d'Esprit's interactive tools make short work of digital landscaping.



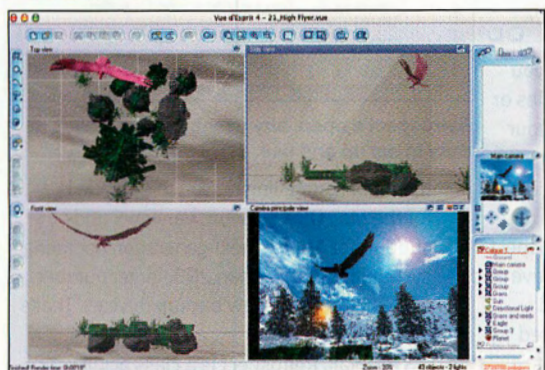
Now that's what we call an Open dialog box.

Vue d'Esprit 4

DESIGN & GRAPHICS

For the longest time, Bryce was the only natural-scenery 3D program available for the Mac, while Windows users had a choice of several apps. How about a warm welcome for e-on software, the once PC-only software maker that brought Vue d'Esprit to the Mac?

Vue d'Esprit is a natural-scenery 3D app, very similar to Corel's Bryce. Vue generates various terrain, water, vegetation, and skies with photo-realistic sass. Rounding out the app are useful features such as volumetric lighting (creating visible light rays through dust, for example); tools for making planets, stars, and rainbows; and caustics rendering (diffusion of light through objects such as crystal).



Vue d'Esprit's interface is unlike that of any Mac app you've ever seen, but it grows on you.

From the get-go, Vue d'Esprit's interface is very un-Mac-like. Then again, it doesn't look like any Windows program either. In the logically presented interface, small icons represent the program's tools, which maximizes the workspace. Unfortunately, the tool icons are on the cryptic side and take some getting used to, but hovering the pointer above an icon identifies the underlying tool.

When you perform the usual Command-N to start a new project, you'll meet the Visual Browser, which offers a collection of templates from which to start your scene. Instead of looking at meaningless file names, you see a thumbnail image, a title, and a description. The Visual Browser extends to other elements, such as objects and vegetation.

Speaking of vegetation, Vue d'Esprit features a technology called SolidGrowth 2, a plant and tree generator. This unique tool "grows" various types of flora in your scene with a randomness rivaling Mother Nature's. The program comes with 30 different types of vegetation, including grass, coral, and palm trees, and more are available from e-on's Web site for a nominal fee.

Editable terrain is key to a 3D landscape program, and Vue d'Esprit's tools let you sculpt your terrain interactively. Imagine pushing and pulling the landscape with your

mouse, or introducing natural geological effects such as pebbles and stones, just by clicking a button—it's not only useful, it's fun!

In the end, the one thing that makes or breaks a 3D program is the quality of the renderer. Vue d'Esprit's rendering engine is quite good, supporting extra goodies found in more expensive 3D programs, such as dynamic lighting and caustics rendering, as well as real-world camera effects like motion blur and depth of field.

Rendering with these pro features increases rendering time, so it's best that you have a Dual Power Mac G4, since the program is AltiVec accelerated and multiprocessor aware. We ran an informal speed test comparing the program's performance on a 500MHz G3 and a 500MHz Dual-processor G4: These machines rendered our test scene in 46 and 16.5 minutes, respectively. Overall, the program was pretty sluggish on the G3, but downright snappy on the Dual G4.

As feature-rich and fun as Vue d'Esprit is, it has some minor glitches. The application quit unexpectedly on a couple of occasions. Since this is e-on software's first Mac effort, we'll cut the company a break—it's actually very stable for a first release. If you like Bryce, the \$199 price (that's \$100 less than Bryce) might be a reason for you to add Vue d'Esprit to your 3D arsenal. Better yet, try the demo for yourself and see how you can become an instant natural-scenery artist.—Andrew Tokuda

COMPANY: e-on software
CONTACT: 877-972-7345,
www.e-onsoftware.com
PRICE: \$199 (SRP)

REQUIREMENTS: 300MHz G3 or
faster, Mac OS X or later, 128MB of RAM

+ GOOD NEWS: Fun to use. Decent renderer with pro
features. Affordable. Great manual.

- BAD NEWS: Minor bugs. Cryptic icons.



Palm i705

HARDWARE

At first, the notion of being able to surf the Internet, check your email, and send instant messages to your friends anywhere, anytime, seems appealing. But then reality sets in: scrawling email messages via Graffiti, surfing the Web at 9.6 Kbps, waiting 5 minutes for driving directions. The Palm i705 lets you partake of all of the aforementioned fun thanks to its built-in wireless capabilities. It's also got a nice, polished form factor. Sadly, the device is a victim of its immature technology.

To get wireless access, you must sign up for Palm.Net service (\$19.99 per month for 100KB throughput, \$39.99 per month for unlimited access). The Palm i705 offers email, Internet, and AOL Instant Messenger services, and you can either set up the device to check a POP3/IMAP email account hourly or daily, or you can check manually at your convenience.

Web surfing is sloooooow and tedious, and

rife with network interference and connection problems. Checking Apple's stock quote via ETrade took 1.5 minutes, Mapquest directions took 4 minutes, and finding show times for the *ET* rerelease via Moviefone sucked up nearly 5.5 minutes of our life. Blame this on the i705's 9.6-Kbps modem (think back to modem speeds of the late 1980s), and you get the picture.

Other problems: The cradle is frickin' huge, and you have to use it (AC adapter included) to recharge the device. Also, the Palm i705 does not ship with Mac OS X software, although once you activate your device via the included software, you can download Palm Desktop for OS X from Palm's Web site. This will allow you to HotSync your info via OS X, but that software is not customized for use with the i705—that means you can't automatically receive updates to the MyPalm mobile-portal

The Palm i705 is a trim, attractive device, but the technology for PDA Web-surfing just isn't there yet.



PHOTOGRAPH BY MARK MADEO

application (essentially a portal on your Palm). This is not a horrible thing, actually, since the mobile-portal updates slow down the HotSync process.

Wireless Internet via PDA is a great idea, but the technology is still too slow and unwieldy for us to recommend it. The Palm i705 is a good-looking handheld with some really nice touches—a huge improvement over its predecessor, the Palm VII.—Cathy Lu



COMPANY: Palm
CONTACT: 800-881-7256 or
408-878-9000, www.palm.com
PRICE: \$449 (SRP)

REQUIREMENTS: Power Mac
with USB port, Mac OS 8.6 or later
(Palm Desktop for Mac OS X available
on the Web)

+ GOOD NEWS: Thin. Light. Built-in wireless.

- BAD NEWS: Slow and spotty Internet access. Device
plus service is expensive. Chunky cradle.

MacAddict RATED
SO-SO

Retrospect 5.0

UTILITIES

The important files on your Mac are like the teeth in your head: If you ignore them long enough, they'll go away—and you'll miss them. Software corruption, mechanical failure, and human error can strike and destroy data at any time. Worse, a fire, a natural disaster, or an act of dog could damage your Mac, or you could lose it to theft.

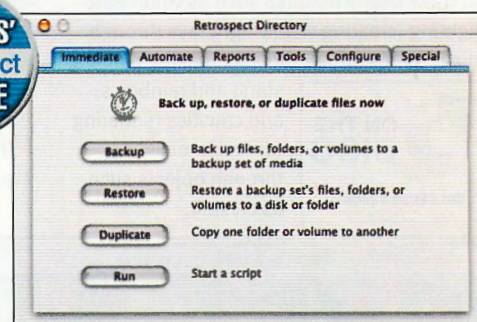
Retrospect comes in three forms; the basic Retrospect Express Backup package backs up data to another hard drive, removable media (such as Jaz or Zip drives), or qualified optical drives (including Apple's SuperDrive and most modern CD burners; see www.dantz.com for a list). Retrospect Desktop Backup adds the ability to back up to tape drives and is upgradeable to the network version—Retrospect Workgroup Backup, which includes

client licenses for up to 20 computers.

Whether you use Mac OS 9 or OS X, installing Retrospect and setting it up is surprisingly simple. Just run the installer, launch the application, and select your backup options in the setup windows; you can set Retrospect to back up all your files or just the ones that have changed since your last backup. And lest you forget to flip the switch and start your daily backup, you can schedule Retrospect to run automatically.

In a long round of tests, we let Retrospect strut its stuff with both a regular hard drive and a tape drive. In every case, it performed backups reasonably fast, and we restored files—even a whole hard drive—without any difficulty.

If you already have Retrospect 4, though,



Retrospect's open, airy user interface makes it easy to set up and use.

the most compelling reason to upgrade is for the Mac OS X support. Version 5 adds support for Apple's next-generation operating system, files larger than 2GB, larger numbers of files, and some new backup devices. That's about it.

All in all, Retrospect is a class act. If your Mac contains files you can't afford to lose, you need Retrospect.—Gene Steinberg



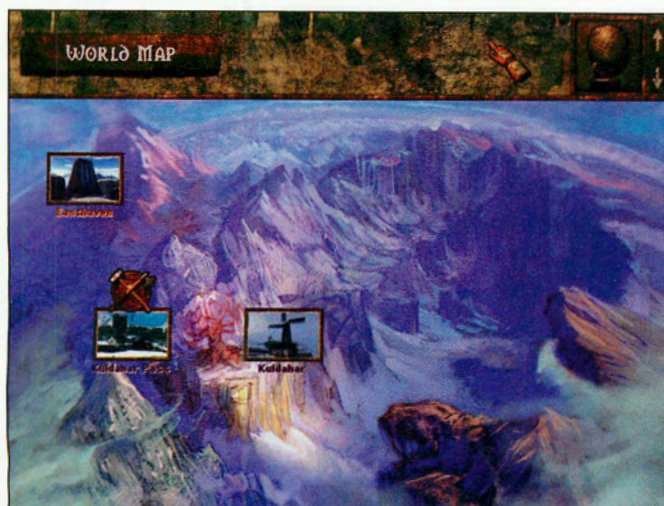
COMPANY: Dantz Development Corporation
CONTACT: 800-225-4880 or 925-253-3000,
www.dantz.com
PRICE: \$79 (Retrospect Express), \$249 (Retrospect

Desktop Backup), \$499 (Retrospect Workgroup Backup);
see Web site for upgrade and sidegrade options
REQUIREMENTS: Power Mac; Mac OS 9.x or
10.1.2 or later

+ GOOD NEWS: Smart scripting
feature. Very reliable. Good manual.

- BAD NEWS: Light on new features.
Expensive high-end versions.

MacAddict RATED
GREAT



Keep your +1 mittens handy: The Spine of the World Mountains form a frozen backdrop for Icewind Dale.



Pretty in Plate—Gorgeous artwork on the character portraits helps set the mood.

Icewind Dale

FUN & GAMES

Set amid the chilly wastes of the Ten Towns area in the popular Advanced Dungeons & Dragons Forgotten Realms game world, Icewind Dale challenges you to assemble a party of adventurers to investigate a growing threat to the region. Trade caravans have been disappearing, hordes of monsters have been spotted just outside settled areas, and rumors tell of even more sinister happenings abroad.

Gamers familiar with the Baldur's Gate

Know Your Enemy

Brains trump brawn in the battles you'll face in Icewind Dale. Some combat advice:

1 Common sense goes far in exploiting a bad guy's weaknesses. Crushing weapons such as maces and flails are more effective against the skeletal undead than are edged swords and arrows. Up against a cold-loving yeti? Don't pelt him with snowballs or try to freeze him. Use fire.

2 Placement is important. Have your fighters form a line to meet enemies in melee while your archers and mages stand safely behind them, launching arrows and spells. Careful combat planning will win battles without getting your characters chewed up and crying for the nearest cleric.

series of RPGs will feel at home in Icewind Dale, the newest PC port from MacPlay. The game utilizes the same third-person isometric perspective as its cousins and has an identical, straightforward interface; it handles combat and movement similarly, and with few exceptions the magic-using characters have access to the same lists of spells. You can torch the enemy with Fireballs and heal your own party with the trusty Cure Light Wounds spell, to name just a few.

You begin the game by creating a party of six characters, so you can balance the strengths and weaknesses of the various class (fighter, mage, and so on) and race (human, elfin, and so forth) combinations. Finding your single-class human thief, armed with archery, a bit weak? Create a dual-class halfling fighter-thief and watch him pick off goblins with ease. This is a boon for players who love to create combat-savvy parties and dislike relying on sometimes-lame nonplayer characters (NPCs). On the downside, Icewind Dale lacks a feature we really enjoyed in Baldur's Gate: interesting interplay between your character and the NPCs that join you on your journey.

Once you create your party, you'll find yourself immersed in a beautifully rendered fantasy environment. You'll hear the snow crunching beneath your boots as you tread the haunted Vale of Shadows and see skeletons crushed to powder by the mighty

swing of your cleric's mace, and it's all augmented by stunning artwork, especially in the character portraits and chapter introductions. The game played well in OS X, with only a slight slowdown in the action when we loaded large numbers of spell effects and combatants.

The AD&D 2nd Edition rules form the basis of gameplay. Familiarity with these is a plus, though not entirely necessary, as the manual clearly spells out the system's important aspects. Combat lies at the heart of Icewind Dale, and mastering its tricks and tactics is vital to your survival (see "Know Your Enemy," left). Thinking out a strategy pays off, and the depth of spells and combat options offered will complement your master plan.

The game is split into chapters that start and finish when you've completed certain quests. After you survive a treacherous journey through the monster-infested Kuldahar Pass, for example, Chapter One unfolds with excellent artwork and a spoken introduction to the town of Kuldahar. The plot has little complexity, unlike that of Baldur's Gate, and you end up on a very linear path that suffers from the lack of an engaging story line. Icewind Dale is more pure dungeon crawl than deep RPG experience. That said, the game is still worth seeing through to the end, so dust the snow off your two-handed sword and enjoy!—Dan Dudziak

COMPANY: MacPlay
CONTACT: 214-855-5955, 800-462-7529,
www.macplay.com
PRICE: \$49.99

REQUIREMENTS: 233MHz G3, Mac OS
8.6 or later, 160MB RAM (128MB in Mac OS X),
690MB hard disk space

+ GOOD NEWS: Eye-catching artwork. Detailed combat system.
- BAD NEWS: Rigid, linear plot. Not much role playing for an RPG.



RioRiot

HARDWARE

Why would we shun a portable MP3 player with four times the capacity of Apple's comparably priced 5GB iPod? The reason is that the RioRiot is clunky, slow, and can't download iTunes' playlist and track information, which makes managing about 4,000 songs way more trouble than it's worth.

The RioRiot is clunky, slow, and can't download iTunes playlist information.

While we don't expect every product's industrial design to wow us, we were hoping for something better than the RioRiot's clunky plastic exterior, which measures 5 3/8 by 3 5/8 by 1 3/8 inches. Setup involves installing a plug-in and USB driver. Then plug the RioRiot into your Mac's USB port (cable and iTunes included), and its icon appears in iTunes' Source list. Then the real fun begins: Filling the RioRiot's 20GB drive takes *at least* four hours.



PHOTOGRAPH BY MARK MADEO

The RioRiot would be cool if it were more like an iPod.

The music plays fine, the built-in radio tuner (with eight presets) provides clear reception, and the EQ is simple (bass and treble sliders only) but adequate. The 20MB buffer memory gave us skip-free play on our morning run. Our biggest gripe with the RioRiot is having to manage the music through a 2.5-inch LCD. The RioRiot doesn't import iTunes playlists (or song information such as genre and year); plan B is manually entering all that information via the RioRiot's three buttons and scroll wheel, or making do

with the onboard DJ options, such as playing the most recently added or most frequently listened-to tracks. Apple and SonicBlue are working on new drivers to make the RioRiot aware of iTunes' genre and year information—they should be available by the time you read this, but there's no word on when you'll be able to import your iTunes playlists.

True, the RioRiot holds 40 CDs, but for a little better ease of use (and immeasurably finer style), we'll stick with Apple's iPod. —Narasu Rebbapragada



COMPANY: SonicBlue
CONTACT: 800-468-5846 or 408-588-8000, www.sonicblue.com
PRICE: \$399.95 (SRP)

REQUIREMENTS: Power Mac with built-in USB port, Mac OS 9.0.4 or later (Mac OS 9.1 or later recommended)

+ GOOD NEWS: Tremendous storage. Fun DJ options.
- BAD NEWS: Won't import iTunes playlists or genres. Bulky.

MacAddict RATED
●●●●●
50-50

TimeSlice 2.2.4

PRODUCTIVITY

Those who charge by the hour for professional services need an accurate, flexible, and convenient application for tracking time. Casady & Greene's TimeSlice, now running in both Mac OS 8.6 to 9.x and OS X, accurately tracks time for any number of different tasks, but it's skimpy on features and needlessly complicated to set up, and it breaks no new ground in terms of convenience.

We had to crack open the manual to figure out how to set up a new project in TimeSlice, a process that involves a trip through all three tabs of the Edit Tasks dialog and then a visit to the Preferences dialog. Even then, before we could start tracking any time, we had to create a new, untitled Time Record window and start the clock. Only at that point could

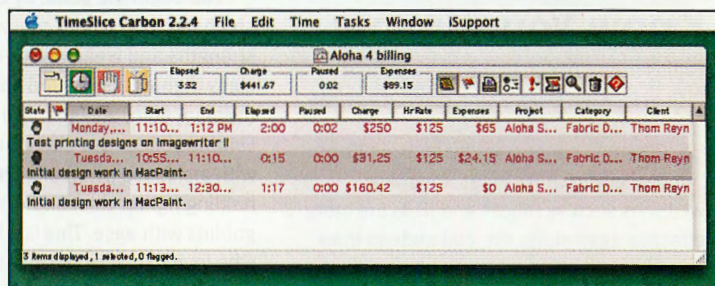
TimeSlice tracks all aspects of your project in columns that you can resize, sort, or hide.

we open yet another dialog to select the project track.

Once you've got your project set up, TimeSlice is easy to use. The Time Record window sports handy buttons for starting, pausing, and stopping the tracking, as well as resizable columns clearly displaying charges, expenses, totals, and lots more. A single click minimizes the window, leaving useful info and buttons visible. But the optional Status Window, which floats over all applications,

displaying elapsed time and charges, doesn't offer a way to start, pause, or stop tracking (though you can set a *hot corner* in which you park your cursor to stop tracking). And while TimeSlice can export data and track sent invoices, it can't generate invoices, and its reports are rudimentary.

If your needs are simple, TimeSlice might suffice. But if you're looking for serious help with billing your hours, TimeSlice will leave you disappointed. —Joseph O. Holmes

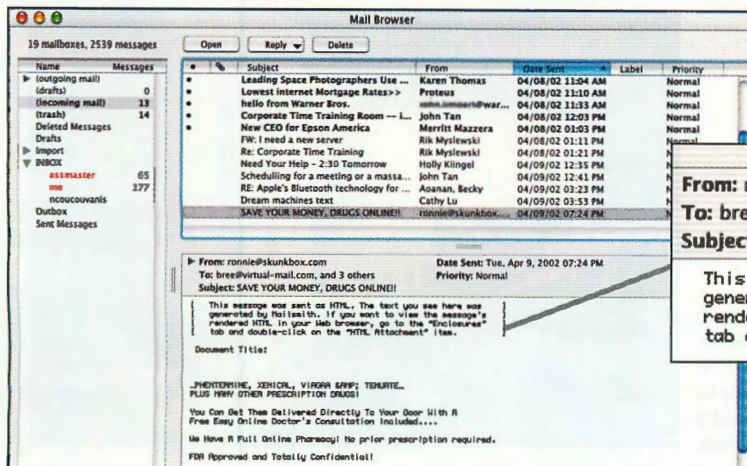


COMPANY: Casady & Greene
CONTACT: 800-359-4920 or 831-484-9228, www.casadyg.com
PRICE: \$60 (SRP)

REQUIREMENTS: Power Mac, Mac OS 8.6 or later

+ GOOD NEWS: Clear display of tracking information. Start, stop, or pause the clock with one click.
- BAD NEWS: Complicated setup for each new job. Doesn't generate invoices. No useful floating tools.

MacAddict RATED
●●●●●
50-50



From: ronnie@skunkbox.com
To: bree@virtual-mail.com, and 3 others
Subject: SAVE YOUR MONEY, DRUGS ONLINE!!
Date Sent: Tue
Priority: Normal

This message was sent as HTML. The text you see here was generated by Mailsmith. If you want to view the message's rendered HTML in your Web browser, go to the "Enclosures" tab and double-click on the "HTML Attachment" item.

An email app after our own heart, Mailsmith just says no to HTML-formatted email.

Mailsmith 1.5.1 vs. PowerMail 3.1.2

PRODUCTIVITY

Most people don't pay for email programs these days, mainly because of the availability of free email apps and Web-based solutions. But for those of us who live by email, Mailsmith 1.5.1 and PowerMail 3.1.2 both shipped this year, and they're both worthy options, especially if you're not happy with your current email kit.

Both PowerMail and Mailsmith are more searchable and generally about as responsive as Mac OS X's built-in Mail app, both offer advanced mail filtering and can import mail from other email apps (including Mail), and both have robust spelling checkers (though neither highlights misspellings on the fly, which is one thing we really like about OS X's Mail).

If you pine for the days of plain-text email, Mailsmith is for you. Like its cousin, BBEdit, it features powerful text-handling and searching capabilities (grep, anyone?), and its no-frills interface will warm the souls of people who value substance over form in their email. Call us old-school, but we prefer our email without the extra formatting, images, and other Rich Text Format and HTML junk that only spammers seem to use anyway. Mailsmith displays such

formatted emails in plain text, and lets you view the HTML version in a Web browser.

People who find themselves repeatedly retyping the same messages will appreciate Mailsmith's Glossary feature, which stores your canned missives in an easy-to-reach place, so you don't have to switch applications constantly or store the text as a draft.

Mailsmith is OSA (open scripting architecture) scriptable, so if you're an AppleScript or Frontier guru, you can work your scripting mojo with this app. PowerMail is also scriptable, but it doesn't include an AppleScript scripting dictionary for reference, nor can it record your actions to a script as Mailsmith can.

Mailsmith doesn't speak IMAP (Internet Messaging Access Protocol), so it can't receive mail from a Microsoft Exchange Server as PowerMail can, but if you can live without that—and without HTML distractions in your email—Mailsmith is a great choice.

Both apps put Mail's search capabilities (as of Mac OS 10.1.4) to shame, based on the simple fact that they let you search more than one mailbox at a time. Ironically, PowerMail uses the same search technology that Apple's Sherlock does, and it's noticeably faster than Mailsmith's, though the latter provides more fine-tuning options (Boolean conditionals and

multiple criteria) in Advanced Query mode.

Mobile users will appreciate PowerMail's option to suspend automatic mail checks when no network connection is available. Now, when you're composing messages on a plane, you won't be hounded by "couldn't connect" error messages every 5 minutes. (Mailsmith has a similar Only Check From Locations setting, but it relies on Mac OS 9's Location Manager and isn't available in Mac OS X.)

Sadly, PowerMail lacks adequate documentation. The manual that ships with version 3.1.2 is from 2000, and though it includes a link to a newer one on the CTM Web site from 2001, this omission is still inexcusable for a product that shipped in 2002. We have another marginal quibble: PowerMail has trouble rendering poorly written or nonstandard HTML.

If you deal with a lot of email, you know that picking the right app is an extremely personal decision; for us, Mailsmith's textual prowess, scripting smarts, and superior manual sealed the deal. If you need IMAP support or want the option of viewing HTML-formatted email in all its intended glory (or if you cringe at Mailsmith's price tag), try PowerMail. Both programs offer free trials (find 'em on this month's Disc), so you can decide for yourself which best suits your needs.—Jason Whong



PowerMail 3.1.2 demo and Mailsmith 1.5.1 demo

Mailsmith 1.5.1

COMPANY: Bare Bones Software
CONTACT: 781-687-0700, www.barebones.com
PRICE: \$99 (SRP), \$39 (upgrade)

REQUIREMENTS: Power Mac, Mac OS 9.x or 10.1 or later

+ GOOD NEWS: True ASCII messaging. SpamCop integration. Smart searching.
- BAD NEWS: Text-only rendering of HTML. Can't receive mail from Microsoft Exchange Server.



PowerMail 3.1.2

COMPANY: CTM Development
CONTACT: www.ctmdev.com
PRICE: \$49 (SRP)

REQUIREMENTS: Power Mac, Mac OS 8.5 or later

+ GOOD NEWS: Fast searches. Works with MS Exchange Server. Senses when network is disconnected.
- BAD NEWS: Manual needs work. HTML renderer needs work. Search is fast but not customizable.



Stylus C80WN

HARDWARE

You may recognize Epson's Stylus C80WN as the Stylus C80 (*Reviews*, Jan/02, p49) with a wireless print server attached. And while the C80 is not our favorite printer, it certainly is respectable, and buying the C80WN model is currently the only way to get the wireless print server (aka EpsonNet 802.11b). This arrangement sucks if you want to add wireless capabilities to a better printer or to one you already own. For our money, better-quality prints trumps wireless convenience.

Setup is a breeze; we connected the C80 to the wireless print server via the included parallel cable, installed the Epson 802.11b WP Admin Utility on an AirPort-equipped iBook, and got down to printing, easy as that. OK, there was a little more to it: We had to download the Mac OS X version of that admin utility from Epson's Web site and add the AppleTalk C80WN to Mac OS X's Print Center (and select it in Mac OS 9's Chooser); if we

Like so many tech toys, Epson's wireless print server is easy to use, but hardly cheap.

hadn't already been using a wired C80, we'd have had to install that driver as well. If you need help, Epson spells it all out very clearly in both printed and electronic documentation.

Once you do the initial setup with Epson's WP Admin Utility (a Java app), you can tweak the configuration any time via the Admin Utility or a Web browser; options include simple password protection, tighter security in the form of WEP (Wired Equivalent Privacy) 64- or 128-bit encryption, TCP/IP settings (which support DHCP, BootP, RARP and Static

addressing), and half a dozen others you probably won't mess with.

The EpsonNet 802.11b got along fine with our AirPort network and fared just as well when we turned off the AirPort Base Station; in both cases, we printed from up to about 100 feet away, through a couple of walls.

Ultimately, wireless printing is still a luxury we can live without until the price comes down a bit, but if you live on the cutting edge, it's here, it works, and it's pretty cool.

—Niko Coucouvanis



COMPANY: Epson
CONTACT: 800-463-7766,
www.epson.com
PRICE: \$449 (SRP)

REQUIREMENTS: Power Mac,
Mac OS 8.1 or later

+ GOOD NEWS: Print from the couch! Easy to set up and use.
- BAD NEWS: Wireless server not available as a stand-alone or with other printers. Expensive.



Tote-Remote

HARDWARE

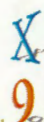
If you do a lot of PowerPoint presentations, you need two accessories: a laser pointer and a way to control your Mac remotely.

Atek's Tote-Remote rolls both of these presenters' staples into one slick little device. Once you plug the infrared transceiver into a USB port, you can flip forward or back in PowerPoint docs, scroll up or down in Word docs, and activate the F5 or Escape key in both—all from up to 30 feet away (line of sight not required). As an added bonus, the device elicits similar effects in other apps, but it doesn't have any software, so you can't tweak the controls.

We still pity the fools who have to give PowerPoint presentations, but the Tote-Remote at least makes it a little bit fun.—Niko Coucouvanis



The Tote-Remote takes some of the pain out of presentations.



COMPANY: Atek
CONTACT: 714-258-0110 or
888-889-9990, www.attek.com
PRICE: \$79.95 (SRP)
REQUIREMENTS: Power Mac
with USB port, Mac OS 8.6 or later

+ GOOD NEWS: Does just what it promises to do.
- BAD NEWS: Laser can cause eye damage if misused.



IRISPenII Executive

HARDWARE

Do you dream of entering text into your Mac with a wave of your hand—editable text, right in your favorite word processor?

Enter the IRISPenII scanner. A button on the tip activates the scanning sensor and a red LED helps you keep the scanner on track as you scan in your text—one line at a time.

On long documents, it's as tedious as it sounds; for small tasks like fishing a line or two off each page in a stack (or reading bar codes), the IRISPenII works very well. Under perfect conditions—a clean original and a flat, stable workspace—the device recognized our typed text with near 100 percent accuracy.

The IRISPenII isn't the total typing savior of our dreams, but it's a surprisingly capable little scanner.—Niko Coucouvanis



The IRISPen isn't quite spy tech for the masses, but it's close.

COMPANY: IRIS
CONTACT: 561-395-7831, www.irisusa.com
PRICE: \$199 (SRP)
REQUIREMENTS: Power Mac with USB port, Mac OS 8.6–9.x

+ GOOD NEWS: Stealthily portable. Scans well in ideal conditions.
- BAD NEWS: A pain in the ass if conditions are less than ideal.



theHotList

Software

Audio

Emagic Logic Audio Silver 4.7.3
\$199.95 (street)
Apr/02, p62
New to digital audio? Start here.

MOTU Digital Performer 3
\$795 (SRP)
Feb/02, p58
The most powerful audio software you'll ever need.

Graphics & Layout

Adobe InDesign 2.0
\$699 (SRP)
May/02, p50
Look out, Quark—Adobe's rival layout tool kicks ass.

Adobe Illustrator 10
\$399 (SRP)
Mar/02, p44
Killer vector-graphics app continues to improve.



Adobe Photoshop 7 ▲
\$600 (street)
Jul/02, p46
Picture-perfect pixel-pusher moves to OS X.

Deneba Canvas 8
\$399 (SRP)
Apr/02, p42
If you can only buy one graphics app, buy this.

Hamrick Software VueScan
\$40 (SRP)
Jul/02, p55
Get more out of your scanner with this driver.

Macromedia Flash MX
\$499 (SRP)
Jul/02, p51
It started in animation; now it can do anything.

Games

Aspyr Otto Matic
\$34.95 (SRP)
May/02, p63
He's cute. He's fun. He's here to save the world.



Bold by Destineer ▲
Age of Empires II: Gold Edition
\$49.99 (SRP)
Mar/02, p48
Defend civilization against the invading hordes.

Graphic Simulations Black and White
\$50 (SRP)
Jun/02, p54
The battle between good and evil can be a blast.

MacPlay Giants: Citizen Kabuto
\$49.99 (SRP)
Feb/02, p48
Hot-and-heavy action with a loopy sense of humor.

Productivity & Utilities

Casady & Greene Conflict Catcher 9
\$69.99 (SRP)
Jun/02, p52
Gain control of everything in OS 9's System folder.



Microsoft Office v. X ▲
\$499 (SRP)
Feb/02, p42
The indispensable industry standard comes to OS X.

Thursby Software Systems DAVE
\$149 (SRP)
Mar/02, p53
OS X's Wintel support is good, but DAVE's is better.

Video & Animation

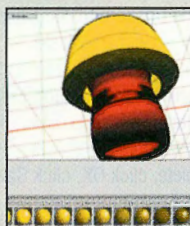
Adobe After Effects 5.5
\$649 (SRP)
May/02, p49
This motion-graphics stud improves its 3D powers.

Apple Final Cut Pro 3
\$999 (SRP)
Apr/02, p45
This pro-level video editor is a real-time revelation.

Discreet Combustion 2
\$4,999 (SRP)
Jun/02, p46
In love with digital video? Go pro with this killer app.



Electric Image ▲
Universe 4.0
\$995 (SRP)
Jun/02, p58
There's a reason why this is the 3D app: It's that great.



Electric Rain Swift 3D ▲
\$159 (SRP)
Feb/02, p57
Quick, easy, fun, cheap 3D Web animation arrives.

Hardware

Audio

Apple iPod (5GB)
\$399 (SRP)
Feb/02, p44
It's the world's greatest MP3 player, bar none.

Digidesign Mbox ▶
\$495 (SRP)
May/02, p59
Bring your recording studio with you on the road.

Emagic emi 2|6
\$499 (SRP)
Apr/02, p63
Sexy, fun-to-use, pro-level USB audio interface.

SonicBlue ▶
RioVolt SP250
\$179.95 (SRP)
Feb/02, p49
This audio/MP3 CD player includes an FM tuner.

Digital Cameras

Nikon Coolpix 885
\$549.99 (street)
Feb/02, p61
Cute, capable camera captures great images.



Olympus Camedia D-40 Zoom ▲
\$599 (street)
Mar/02, p56
How do 4 megapixels fit in a camera this compact?

Displays

Formac gallery 1740
\$899 (SRP)
Mar/02, p49
This advanced-technology LCD display comes cheap.

Formac ProNitron 22800
\$699 (SRP)
Apr/02, p47
Huge but affordable, this CRT monitor looks great.

Printers

Epson Stylus Color C60
\$79 (SRP)
Jun/02, p48
Color, convenience, class—this inkjet's got it.

Epson Stylus Photo 820
\$129 (SRP)
Feb/02, p55
This six-color unit makes perfection affordable.

Samsung ML-1210
\$199 (SRP)
Jun/02, p53
At this low price, anyone can afford a laser printer.

Storage

CMS Peripheral ABS Plus
\$237 to \$799 (SRP)
May/02, p59
Hate to back up? With this baby, it's almost fun.

EZQuest Cobra Slim 60GB FireWire Hard Drive
\$629 (SRP)
Jul/02, p56

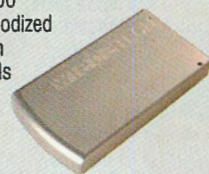
This gorgeous drive proves even storage can be sexy.

MCE Technologies Lucid
\$299 (SRP)
May/02, p60
This portable CD-RW has FireWire and looks cool.



TDK veloCD ▲
\$315.99 (SRP), \$275 (street)
Jul/02, p54
This FireWire-equipped CD-RW drive is freaky fast.

WiebeTech MicroGB 40GB ▼
FireWire Hard Drive
\$329.95, bare case \$159.95 (SRP)
Jul/02, p56
A cool anodized aluminum case holds speedy innards.



Because inquiring minds have the right to be inspired

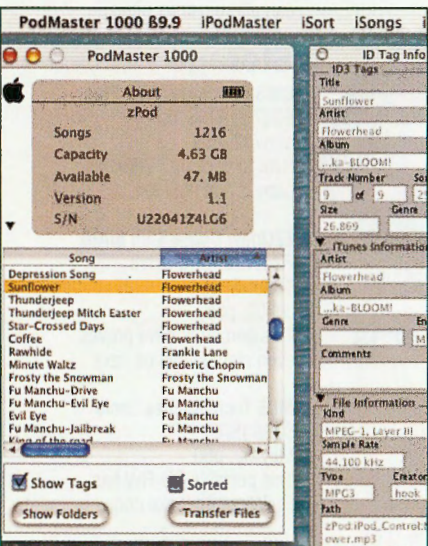
ASKUS

Smart answers to tough questions

FROM IPOD TO MAC AND BACK AGAIN

Is it possible to transfer songs from my iPod to my Mac?

Apple designed the iPod to accept files from iTunes on your Mac and not to send files to iTunes on your Mac. That way, in theory, you can't sow your wild Hall and Oates MP3s on other people's computers. However, it didn't take long before iPod transfer utilities cropped up to skirt around Apple's copy-



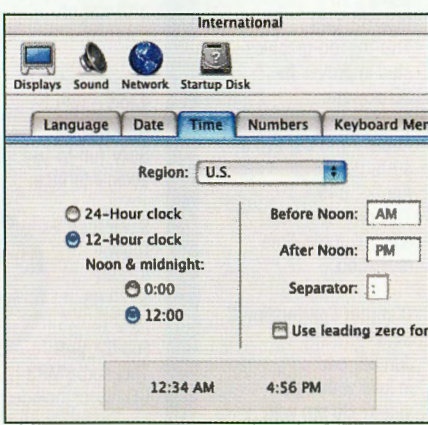
Transferring songs from the iPod never looked so cool...and wrong, of course.

protection scheme. Perhaps the best one we found is Podmaster 1000 (\$8, <http://homepage.mac.com/podmaster>), a shareware utility for Mac OS 9 and Mac OS X that allows you to browse the iPod graphically and transfer files to your iTunes Library. Remember, like Steve says, don't steal music!

DISMISSING MILITARY TIME

My Mac running OS X displays military time. How do I get back to a regular 12-hour clock?

In the International system preference panel, select the Time tab and click the 12-Hour Clock button.

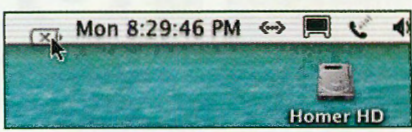


When you just want normal time, not Zulu time.

SHUFFLING X MENU BAR ICONS

How can I rearrange the icons in the Mac OS X menu bar?

These icons, called Menu Extras, are created by special little Mac OS X applications stored in the System > Library > CoreServices > Menu Extras folder on your OS X hard disk. (By the way, if a Menu Extra isn't working correctly,



Move your Menu Extras into any old order.

this would be a great place to start troubleshooting.) To move Menu Extras around the menu bar, just hold down the Command key while you click and drag them. Dragging a Menu Extras icon off the menu bar will delete it; to restore the item, go back into the Menu Extras folder and double-click its application icon. For example, to re-create the Volume Menu Extra icon, double-click Volume.menu in the Menu Extras folder. You can move the clock icon, too.

CHANGING THE SYSTEM DEFAULTS

What is the defaults Mac OS X command-line tool?

You can use *defaults* to write preference changes to your system. This little tool is a holdover from Mac OS X's Next beginnings and is pretty handy for invoking OS X tricks like making your Terminal transparent. While Web sites such as Resexcellence (www.resexcellence.com/terminal/defaults.shtml) thoroughly document how to make these system changes, how do you find out what parts of your system you *can* change? The secret to finding these hidden options is to use the *defaults* program's built-in find command from the command line. For example, say you want to find out how to add the Quit menu line to the Finder menu. Type the following into a Terminal window: `defaults find quit`

Difficulty Ratings

EASY

No whining—anyone can do this!

TRICKY

It'll take some effort, but you can do it.

TOUGH

This stuff's for the pros.

How To Read Our How-Tos

A MacAddict 101 Manual

Advice is only helpful if you understand what your adviser is saying (and if you don't secretly want to strangle the person doling it out). Likewise, we can't expect you to plow through our tutorials unless you understand what we're instructing you to do. For those who need a little help deciphering our more indirect directives, we've compiled a list of our commonly used commands and their translations to help you understand the directions in our how-tos and conquer each project successfully.

Example

Translation

Select the Unsharp Mask (Filter > Sharpen > Unsharp Mask).	Select the Unsharp Mask: From the Filter menu, select Sharpen, then Unsharp Mask.
Press Delete, press Return, press S, and so forth.	On your Mac keyboard, press the mentioned key.
Click Delete, click OK, click Save, and so on.	Use your mouse to click the mentioned button onscreen.
Control-click the apple logo, Shift-click each file name in the list, and so forth.	While holding down the keyboard key mentioned, use your mouse to click the designated item.
Copy the image (Command-C), paste it into a new layer (Command-V), and save your file (Command-S).	Press both the Command key on your keyboard (the ⌘ key) and the referenced key to carry out the task.

Press Return and the following appears:

```
Found 1 keys in domain
'com.apple.finder': {QuitMenuItem =
0; }
Found 1 keys in domain
'com.apple.Terminal':
{AlwaysPromptOnQuit = 0; }
```

Since our Mac does not currently have a Quit line in the Finder menu, we know that the value for not seeing the Quit menu line (represented by QuitMenuItem) is 0. Therefore, we can deduce that to see the Quit menu line, we must change the value from 0 to 1. Typing the line below and pressing Return will put a Quit menu line in the Finder menu:

```
defaults write com.apple.finder
QuitMenuItem '1'
```

You will have to log out and log in again or restart your computer to see the changes. To revert to the old way of doing things, retype the command and substitute a 0 for the 1.

EXPLORING IN JAPANESE

How can I set up Internet Explorer in Mac OS X to view Japanese text?

There's no need to fuss with the International system preference. Simply launch Internet Explorer for Mac OS X and choose Character Set from the View menu to change the way Web pages view various character sets. Choosing Japanese (Auto Detect) from the Character Set pop-up menu will promptly display Japanese Web pages in the proper font.

CONTROLLING AIRPORT WITH ETHERNET

My family has set up a nice Ethernet network in our house, and we use an Apple AirPort Base Station to dial up the Internet via a modem. Those of us with AirPort cards can connect and disconnect the modem at will, but the Ethernet computers can't disconnect the modem on the AirPort network. Is this a bug?

This issue is not a bug, but it *is* a problem. Only AirPort wireless clients can manually connect and disconnect the AirPort Base Station's modem. To enable Ethernet-connected computers to connect and disconnect the Base Station's modem, try Jon Sevy's AirPort Modem Utility (free, <http://gicl.mcs.drexel.edu/sevy/airport/>). This Mac OS 9



Jon Sevy's AirPort Modem Utility enables Ethernet computers to turn the modem on and off.

and Mac OS X Java application provides easy access to your AirPort modem and even tells you how long you've been online. It's a must-have utility for any AirPort network that uses a modem.

SMARTER SCREENSHOTS IN MAC OS X

Can you change the file format for the screenshots in Mac OS X?

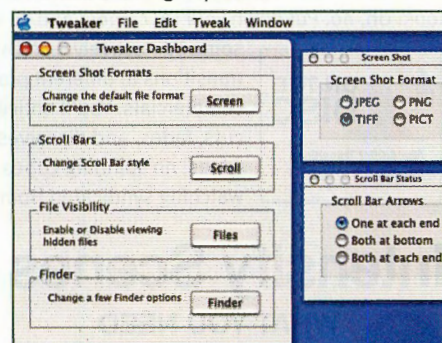
Sure. Here are a couple ways to do it:

1. Use a utility like TinkerTool (www.bresink.de/osx, free) or Tweaker (www.them.ws/themsw/tweaker, free), both of which let you change the default screenshot format to JPEG, TIFF, PNG, or PICT.

2. Open the Terminal application and type the following into its command-line window:

```
defaults write 'Apple Global Domain'
AppleScreenShotFormat 'TIFF'
```

Then press Return. This command lets you take screenshots in TIFF format. To change the format, substitute JPEG, PNG, or PICT for TIFF between the single quotes.



Tweaker tweaks the format of your screenshot.

With six years of tech support under his belt, there's nothing Buz Zoller can't fix.

This Month

58 Create Pro Transitions in iMovie

If you think your gratuitous use of transitions makes your iMovie look professional, stop! It doesn't. Learn how to use transitions creatively and effectively.



62 Install Mac OS X on Unsupported Macs

Beige Power Mac users, rejoice—you can install Mac OS X on certain older machines, despite what Apple says. We show you how.



64 Set Up Unique Email Alerts

For those who can't ignore that little eep (or other audio oddity) that interrupts you whenever email arrives, here's how to employ a kind of Caller ID so you don't waste time dropping everything for spam.



66 Make Money from Your Web Site

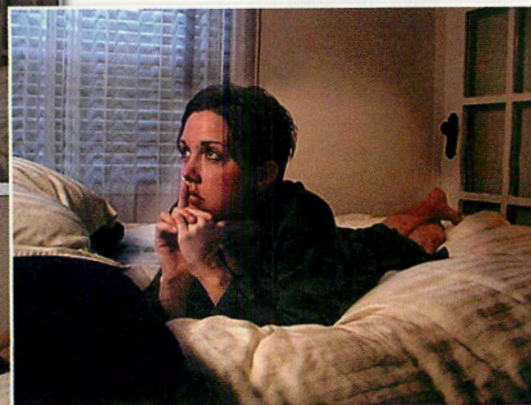
Is your beer fund getting a bit low these days? We show you how your Web site can generate some extra cash—even if you've got nothing to sell.



Create Pro Transitions in iMovie

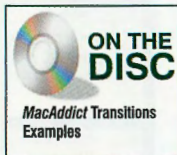
by Andrew Tokuda

We love iMovie for its effects and transitions capability, but oh, how we hate watching bad ones in action! Effects overload is a trap that novice iMovie users tend to fall into when they discover that these “neat” effects are easy to use and can give their movies that “professional” look. Uh, no. Put down your DV camera and go watch some TV—actively. Look at the transitions in different programs and commercials. You’ll notice that most are simple cuts, fades, and dissolves. No ripples, no clock-wipes, no spinning cubes (unless you’re watching syndicated Home Improvement reruns).



iMovie transitions can do more than just provide simple segues between scenes.

That said, any movie can benefit from special transitions and effects if you know when to use them. If you want to add true professionalism to your DV work, here’s how to employ iMovie’s transitions tastefully to create pro-caliber special effects.



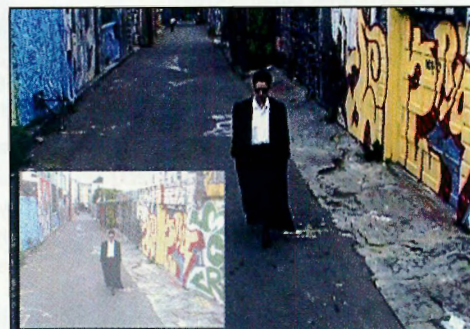
Intensify Scenes with White Flash



WHAT YOU NEED

- iMovie 2
- iMovie Plug-in Pack 2.1.1 (requires Mac OS X; www.apple.com/imovie)
- MacAddict Transitions Examples (on the Disc)

White-flash effects are great for cutting between quick, intense scenes, and Hollywood action-movie trailers often use them to add an explosive quality. For our example movie, TrailerFinal.mov, we intercut video footage and title stills with white-flash effects. Watch TrailerCuts.mov to see this sequence without transitions (dreadful). Here’s how we spiced it up using iMovie’s Wash In transition, which fades in a clip from white (use your own or iMovie’s sample clips, and follow along).



Bring energy to your movie trailers by adding a flash of white (inset) between quick cuts.

1 Add the Effect Drag two or more clips from the Clips window onto the timeline in the order you want them to appear. Click Transitions and select Wash In; a sample plays in the Preview window. Move the Speed slider until you see 00:20 (under 1 second) displayed in the Preview window. This effect works best with a short duration; make it longer and it’ll have less impact and call attention to itself. Drag the Wash In icon between each clip on your timeline. When you press play, the flashes may look a bit jarring. That’s what we’re going for here, so don’t be afraid.



A white flash adds shock value; keep it short for the most impact.

2 Create Variation If you use a slew of clips, the repetition can get monotonous. No problem—break it up by adding variation. We added slow motion at the end of our movie (where our actor spins around screaming) by clicking its clip and moving the Faster-Slower slider to the right. We also split an overhead shot of our actor in two, and applied slow motion to the second segment. To do this, we positioned the playhead at the point where our actor turns her head and selected Split Video Clip At Playhead from the Edit menu. We selected the second half of the split clip in the timeline and slowed it down using the Faster-Slower slider.



Split the clip in two to add effects to a selected portion of a scene instead of the full clip.

Create Dramatic Fades

EASY

WHAT YOU NEED

- iMovie 2
- MacAddict Transitions Examples (on the Disc)

The popular fade-from-black, fade-to-black transition is a Hollywood classic. Traditionally, it's used to begin a scene (fade in) and then end a scene (fade out). In short clips, a fade-in, fade-out technique between cuts can be quite dramatic, creating a different feel than if you were to use straight cuts (going from one shot to another without a transition). This type of transition works well for a nonaction scene such as a video collage.

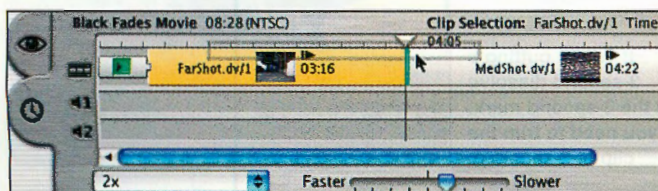
For our example movie file, *StreetQuickFades.mov*, we took three shots (far, close, and side) of an actor walking down a San Francisco street. We used a quick fade-in, fade-out technique between each cut to add more drama (watch *StreetCuts.mov* to see the movie without any transitions). Here's how to create the effect (use your own clips or iMovie's samples, and follow along).

1 Set the Fade In Launch iMovie and drag any three movies from the Clips window to the timeline below in the order you want them to appear. Click Transitions to access iMovie's transitions, and select Fade In. Drag the Speed slider until you see 00:20 appear in the Preview window's lower-right corner. This sets a fade-in time just shy of 1 second. Then drag the Fade In icon (the green box with the right-facing triangle) from the Transitions panel to the beginning of the first clip in the timeline.

Move the Speed slider until you see 00:20 in the black preview window to set an effect time of just under a second.



2 Set the Fade Out From the Transitions list, click and drag the Fade Out icon (any transition you now apply will have the same duration unless you change it) and place it between the first and second clips in the timeline. The first clip now fades in and fades out. Do the same with the other clips in the timeline, dragging Fade In before each clip and Fade Out after (you'll have two transition effects between clips and single transitions at the beginning and end of the movie).



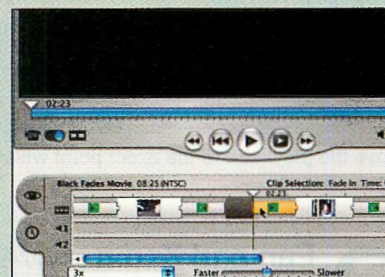
iMovie highlights a targeted cut when you're dragging a transition between clips so you can pinpoint its placement.



You don't have to restrict fade-ins and fade-outs to a movie's beginning and end. Use them between cuts for added drama.

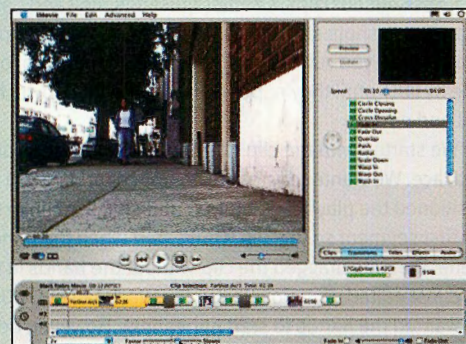
Alternatives

LONG FADES To play up the transitions, give the black more screen time. Click the second Fade In transition in the timeline (look for a green block with a right-pointing triangle, between the first and second clips), and move this block about .5 second to the right in the timeline (a dark gray block appears between the Fade Out and Fade In icons). This creates .5 second of nothing, or black. Do the same with the Fade In transition between the second and third clips. The result will look something like *StreetLongFade.mov*.



Moving a Fade In transition away from its neighboring Fade Out creates extra black screen time.

SLOW MOTION Depending on the content of your clips, slow motion might play up the drama very effectively (see our *StreetLongSlow.mov* example). To create slow motion, select any clip in the timeline and drag the Faster-Slower slider (below the timeline) to the right. Use slow motion sparingly—it can get old really quick.



Slow motion can boost a scene's cool quotient. Just highlight a clip and drag the slider toward Slower.

Make a Person Magically Appear

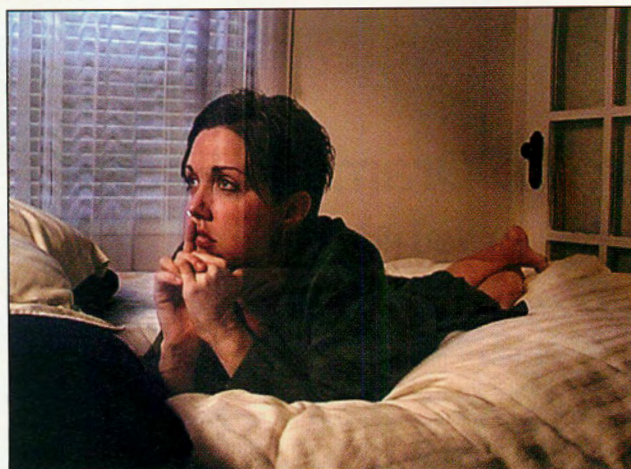
TRICKY

WHAT YOU NEED

- DV camera
- Tripod
- iMovie 2
- iMovie Plug-in Pack 2.1.1 (requires Mac OS X; free download at www.apple.com/imovie)
- MacAddict Transitions Examples (on the Disc)

While iMovie transitions generally provide segues between clips, you can also use them to create special effects. With a little bit of creative camera work and iMovie, you can make a person appear out of thin air! Check out MagicDissolve.mov.

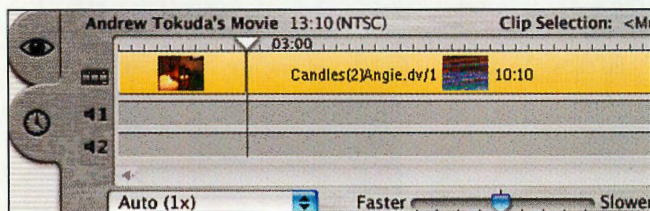
For this effect, you need to shoot two segments of video from exactly the same location. You absolutely, positively must use a tripod to lock down the position of the camera, or this effect won't work. Shoot footage of a motionless scene without your subject for about 10



David Copperfield isn't the only one who can make objects appear out of thin air—with a DV camera and iMovie, you can, too!

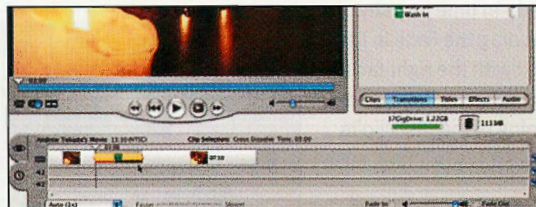
seconds, and then pause the camera. Then shoot another 10 seconds or so with your subject in the scene (don't let him or her pick up objects until at least 5 seconds into the segment). Import both shots into iMovie as a single clip. Now let's create the effect.

1 Split the Clip Drag the clip from the Clips window into the timeline and move the playhead to the exact point where the subject suddenly pops into the picture. Use the left and right arrow keys to nudge the playhead backward and forward, fine-tuning its location. Then select Split Video Clip At Playhead from the Edit menu to split the clip into two.



Move the playhead to the exact point where your subject appears in your scene.

2 Add a Dissolve What you want to do is make the subject slowly fade into the picture; the Cross Dissolve transition will work. Select Cross Dissolve in the Transitions panel and drag the Speed slider to 03:00 (3 seconds). This gives you a nice, slow dissolve. Drag the Cross Dissolve icon from the Transitions panel between the two clips, and voilà! One magical effect.



We hate people who pop in without warning; we made our actor's hands emerge gracefully by inserting a dissolve.

3 Pan and Zoom If you're the adventurous type, a locked camera shot may not be your call of the wild. It certainly wasn't ours. We decided to add some motion to our "magic dissolve" shot by panning (rotating) and zooming the camera during shooting. A word of warning: This is tough! It takes a steady hand, a fluid tripod head, and a bit of luck to pull this off without exposing your shaky maneuvers in the end.

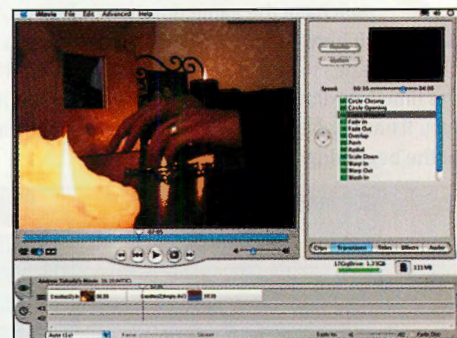
Check out our clips, CandlesNoHands.mov and CandlesWithHands.mov. These shots start at just about the same zoom point. If the shots don't match, you can tediously trim the beginning of one of your two clips little by little until they're perfectly aligned. In iMovie, this is pretty much trial and error.

We started with the clip where our actor's hands pick up the necklace. We wanted the hands to appear at 03:00 in the timeline, so we positioned the playhead at 03:00 and split the clip in two. We discarded the first segment so the clip would start when the hands entered the scene. We then dragged the clip without the hands in front of the clip we'd just edited, and positioned the playhead at 03:00 (the point where we wanted the hands to start appearing). However, because our pending Cross Dissolve spanned 3 seconds, we moved the playhead to 06:00

(6 seconds) to accommodate the extra 3 seconds. (You can do the math, folks.)

From here, we used the Split Video Clip At Playhead command and threw away the portion of the segment after 06:00. Finally, we dragged the Cross Dissolve transition (with Speed set to 03:00) between the two clips—and that's it! (Magic Dissolve.mov features two examples of this motion effect.)

If you're putting a 3-second dissolve at the 3-second mark, you need to trim the clip at 6 seconds.



Andrew Tokuda runs 3rd Light Digital Media, a video and digital-media service, though he's unsatisfied with the title Coffee Guy.

Backup

It's Not as Rough
as It Used to Be . . .

Automatic Backup System *The Only Complete Software and Hardware Solution!*

[FireWire®]



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Install Mac OS X on Unsupported Macs

by Owen W. Linzmayer



WHAT YOU NEED

- Power Mac 7300, 7500, 7600, 8500, 8600, 9500, 9600, or a Mac clone based on one of these systems
- Mac OS 10.1 or later
- Mac OS 9.1
- XPostFacto 2.11 or later

You're standing in the software aisle, Mac OS X box in hand, salivating over all the great features listed on its side, when suddenly your stomach sinks as you read the system requirements and realize that your trusty old Mac doesn't have what it takes. Or does it? To run OS X, Apple claims you need a Power Mac with a factory-installed G3 or faster processor. Not so! Believe it or not, we're running Mac OS 10.1.3 on a Power Mac 7600 with an XLR8 350MHz G3 upgrade card.

Though you'll get much better performance if you have at least a 300MHz G3 upgrade card, you can install OS X on any of the Mac models listed even if you don't. Granted, depending on the speed of your processor, you probably won't be flying through processes with the highest degree of efficiency.

If you've got one of the officially unsupported Macs, here's how you

Before You Start, Do This

DUMP THE JUNK You need at least 1.5GB of hard drive space just for Mac OS X's basic installation. And, of course, you'll want room to hold all those new OS X apps and utilities you'll no doubt be acquiring. Toss out or archive your stuff to free up at least 2GB of space.

RAMP UP THE RAM Mac OS X requires a minimum 128MB of built-in memory; we recommend at least 256MB. If you try to get away with the bare minimum, Virtual Memory will page information to and from the hard disk as needed, which can slow things down considerably.

BACK UP EVERYTHING Anytime you make a radical change to your Mac, you should always—and we mean always—back up your stuff in case something goes wrong (Dantz's Retrospect Express is a terrific tool for doing this; \$49, www.dantz.com—see our review of version 5.0 on p50). If you decide to boldly try this without a net, don't come crying to us when your MP3 collection suddenly disappears into a black hole.

UPGRADE TO MAC OS 9.1 If you aren't currently running Mac OS 9.1, you will need to upgrade before continuing (this is the latest version of the OS approved for use on unsupported Macs). An update from 9.0 is available for free from Apple at <http://docs.info.apple.com/article.html?artnum=75103>. While the Mac OS 10.1 retail package contains a 9.2.1 Install CD, it won't run on unsupported machines. But that's not a problem since Mac OS 9.1 works just fine in OS X's Classic mode. Finished with everything? Alrighty, then...on with the upgrade!

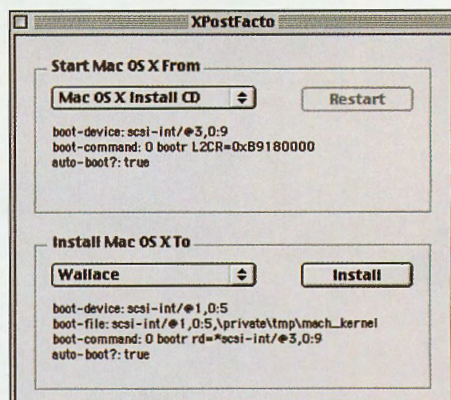


PHOTOGRAPH BY W. B. JONES

Teach an old dog new tricks.

can install Mac OS X with the help of a simple utility called XPostFacto (free, <http://eshop.macsales.com/OSXCenter/XPostFacto>). For the record, Sonnet Technologies' PCI X Installer (\$29.95, www.sonnettech.com) is a utility similar to XPostFacto that may appeal to those of you who are apprehensive about attempting a Mac OS X installation without Sonnet's free customer service at your beck and call.

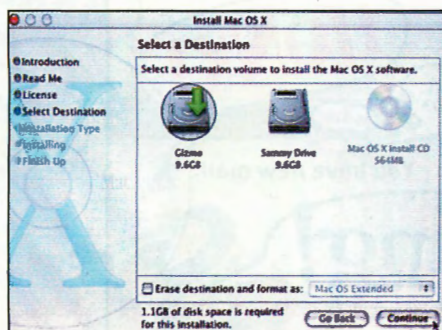
1 Choose What and Where Insert the Mac OS 10.1 Install CD into your CD drive and then launch XPostFacto to open its window. In the top drop-down menu, choose Mac OS X Install CD as the startup volume. In the bottom drop-down menu, choose the volume where you want to install Mac OS X, probably your hard drive. Then click Install. XPostFacto quickly installs a few files (a modified version of BootX and some kernel extensions, if you must know) on the destination volume, then restarts the Mac. If all goes according to plan, your Mac will start up from the Mac OS X Install CD.



Tell XPostFacto what volume to start up from and where to install the X bits using the drop-down menus.

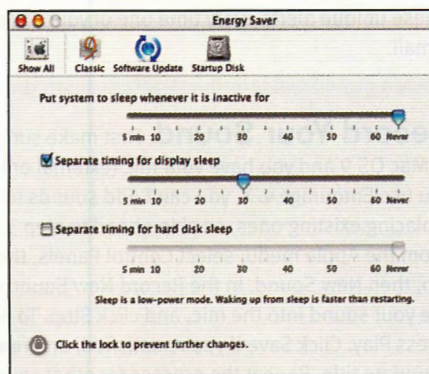
2 Install Mac OS X Launch the Mac OS X Installer and select the same destination volume you just chose in XPostFacto. Do not select the check box to erase and reformat the volume, as this would wipe out the necessary files that XPostFacto just installed. Follow the rest of the Installer's instructions, and then restart your Mac when prompted.

To install the meat of OS X, follow the Mac OS X Installer app's instructions.



4 Invoke Insomnia Now for a little system tweaking. Sleep mode in Mac OS X can cause data corruption on hard drives in some systems, so never choose Sleep from the Apple menu. Further prevent your Mac from napping by selecting System Preferences from the Apple menu, clicking Energy Saver, and setting the system and hard disk to never sleep (feel free to allow your display to sleep separately—this is harmless).

To prevent possible data corruption, set your system to never sleep.

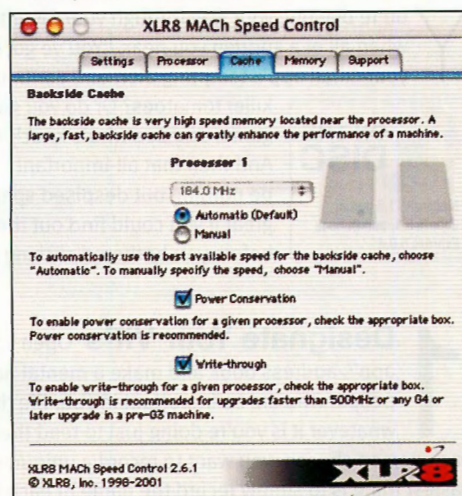


3 Don't Panic Upon restarting, your Mac crashes with what's known as a kernel panic after installing Mac OS 10.1. This happens because the OS 10.1 Installer moved the kernel extensions that XPostFacto originally installed. This trouble is temporary. Restart your Mac, holding down the Option key to boot up in Mac OS 9 (if this doesn't work, insert the Mac OS 9 Install CD and restart while holding down the C key). Then launch XPostFacto again. From the top drop-down menu, choose your new Mac OS X volume. Then click Restart. XPostFacto conveniently reinstalls the necessary kernel extensions, and then properly boots your Mac into Mac OS 10.1 (hurrah!).



Before leaping into OS X, you'll need to boot up in OS 9 once more and have XPostFacto reinstall some important kernel extensions.

5 Turn On the Cache If your Mac has a G3 or G4 upgrade card installed, you must update the driver to enable its L2 cache under Mac OS X. Without the cache enabled, the processor functions, but not optimally. If your card's manufacturer hasn't released a Mac OS X update, try using L2CacheConfig (free, <http://eshop.macsales.com/OSXCenter/XPostFacto>) or Cache Control X (free, www.powerlogix.com) to enable the cache. That's it—time to jump online and go grab some OS X apps!

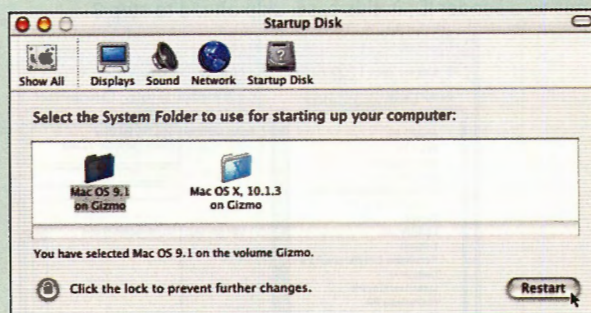


If you've got a G3 or G4 upgrade card installed, make sure to update its driver for OS X compatibility, which enables the L2 cache.

Flip-Flopping

When you're in Mac OS X and want to reboot your Mac in Mac OS 9 (maybe an old app refuses to work properly in OS X's Classic mode), simply select System Preferences from the Apple menu, click Startup Disk, select the desired Mac OS 9 volume, and click Restart. This is the same process you'd use when switching OSs on a supported Mac.

However, to switch back to OS X, instead of using Mac OS 9's Startup Disk control panel as you would do with a supported Mac, you need to launch XPostFacto, choose your desired Mac OS X volume, and then click Restart. Don't worry, XPostFacto won't repeat the kernel installation process; it just writes the required settings to nonvolatile RAM (NVRAM) before restarting Mac OS X.



You can start up in OS 9 via the System Preferences as any OS X user would, but you'll need XPostFacto to go back to X.

Set Up Unique Email Sender Alerts

by Jason Whong

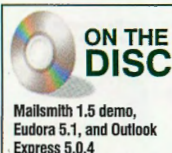
EASY

WHAT YOU NEED

- An email account
- One of the following email apps: Apple's Mail.app (free with Mac OS X, www.apple.com), Microsoft's Outlook Express (free, www.microsoft.com/mac), Microsoft's Entourage (part of Microsoft Office, \$499, www.microsoft.com/mac), Bare Bones Software's Mailsmith (\$99, www.barebones.com), or Qualcomm's Eudora (free, www.eudora.com)
- A microphone (optional)

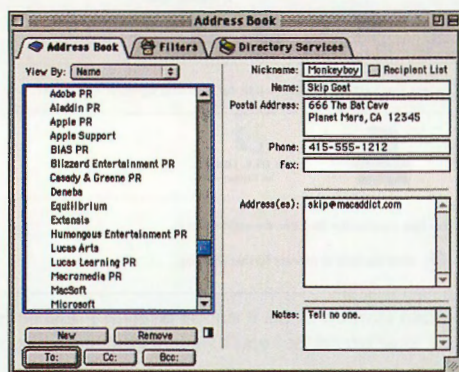
You're blasting your way through your favorite level of Otto Matic, when all of a sudden you hear, "You've got mail!" Do you ignore your email app's tempting alert and continue slicing and dicing

killer tomatoes? Or do you get all giddy, stop the game, and see who's knocking on your in-box? And then that all-important message turns out to be nothing but despised spam. Wouldn't it be great if you could find out the sender's identity before you bothered clicking over? You can.



Mailsmith 1.5 demo, Eudora 5.1, and Outlook Express 5.0.4

1 Designate Your VIPs Open your email app's address book and make a mental note of all the people who are so important in your life that you'll drop whatever it is you're doing just to read their email. For each person chosen, you want to record a unique sound; the easiest thing is to simply record the name of each VIP. That way you won't have to remember what alert represented which person. Alternatively, you can record just one sound that represents all your VIPs to save some time. If you're not keen on recording, you can use any of the unassigned Mac OS alert sounds as a sender ID; in this case, skip ahead to step 3.



Take a good look at your address book and decide which people deserve your full and immediate attention.

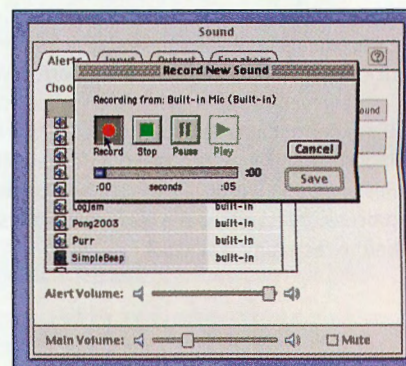


By setting up an email sender ID system, you can nip the "should I bother checking who sent me email" dilemma in the bud.

Much as you can set distinctive ring tones on a cell phone, you can set up your email program to emit an audible signal when someone important has dropped a line so you can switch over immediately. For total sender personalization, we show you how to record custom alerts and how to set your email app (any of those mentioned above) to play these unique alerts every time one of your key people sends you an email.

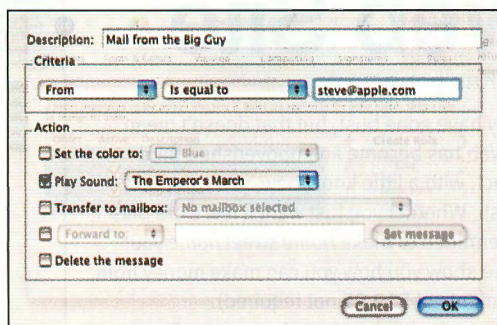
2 Record Your Sound First make sure you've booted in Mac OS 9 and you have your mic (external or built-in) ready. If you use Entourage v. X, you can't add sounds to the app without replacing existing ones, so skip ahead to step 3 unless you want to do this. From the Apple menu, select Control Panels, then Sound. Click the Alerts tab, then New Sound. In the Record New Sound dialog, click Record, make your sound into the mic, and click Stop. To hear your recording, press Play. Click Save if you're satisfied, and rename the sound with an appropriate title. Repeat the process for other sounds. Mail.app users: When finished, click and drag your new sounds from the Alerts list to your desktop, and then use a file conversion program to convert them into AIFF files—we recommend SoundApp (free, www.spies.com/~franke/SoundApp). Mailsmith users: Drag sounds out of the Alerts list and put them in the Sounds folder inside the Mailsmith Support folder. Everyone else go on to step 3.

Record new alert sounds directly in the Sound control panel; you've got only 5 seconds, so make them count.



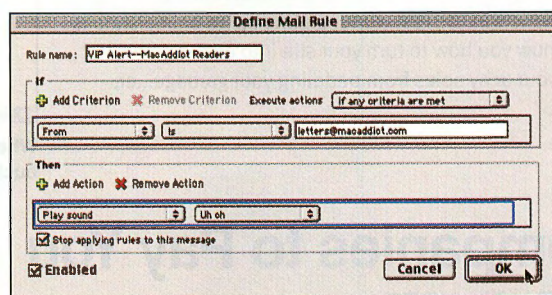
3 Assign the Alerts Setting up your email program to play a different sound when you get VIP email is easy; the process is similar no matter what program you're using. Just remember to choose a different alert—either your own or one of Apple's—for every unique VIP (though you can use the same alert for all veeps if you prefer).

MAIL.APP USERS Reboot in Mac OS X, launch Mail.app, and select Preferences from the Mail menu. In the Mail Preferences window, click Rules, then Create Rule to open a dialog. In the Description field, give the new rule a name. In the Criteria pane, select From from the first drop-down menu and Is Equal To from the second, and type a VIP's email address in the text field. In the Action pane, check the Play Sound box. From the drop-down menu, either choose a system sound or select Other and navigate to one of your custom AIFF sounds on the hard drive. Click OK. Repeat for all the other VIPs.



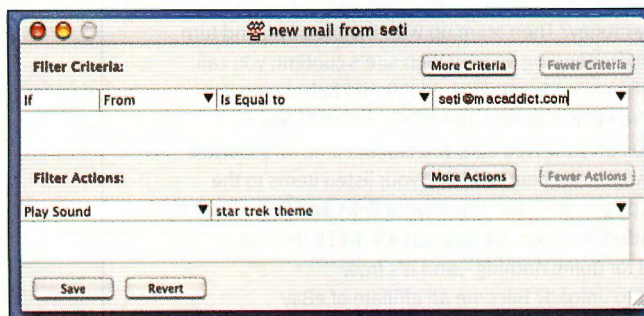
Here, we've set Mail.app to play an excerpt from "The Emperor's March" should good ol' Steve decide to drop us a line.

OUTLOOK EXPRESS AND ENTOURAGE USERS (Note: Entourage 2001 dialog menu names vary slightly.) Launch your email app and select Rules from the Tools menu. In the Mail Rules window, click New; in the Define Mail Rule dialog, give the rule a name in the Rule Name text field. In the If pane, select From from the bottom drop-down menu; another drop-down menu appears, along with a text field. Select Is from the second drop-down menu and type a VIP's email address in the text field. In the Then pane, select Play Sound from the drop-down menu and pick an alert sound (your own or an existing one) from the drop-down menu that appears next to it. Click OK. Repeat for all the other VIPs.



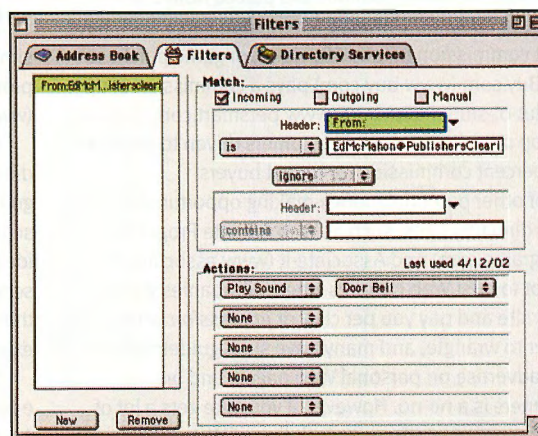
In case one of our dear readers writes in, we found an appropriate System sound to alert us (shown here in Outlook Express).

MAILSMITH USERS Launch Mailsmith. From the Window menu, select Mail Filters. In the Filters window, click New; in the subsequent dialog, give the new filter a name and click Create. In the Filter Criteria pane, select From from the first drop-down menu, select Is Equal To from the second drop-down menu, and type a VIP's email address in the text field. In the Filter Actions pane, select Play Sound from the first drop-down menu, and either select one of Mailsmith's built-in sounds or choose one of your own from the second drop-down menu. Click Save, and repeat for all the other VIPs.



A MacAddict SETI fan can be tipped off when a Vulcanian being sends an email.

EUDORA USERS Launch Eudora. From the Window menu, select Filters to open the Filters window, then click New. In the Match pane, check the Incoming box and select From from the Header pop-up menu. Select Is from the drop-down menu, and type a VIP's email address in the text field. In the Actions pane, select Play Sound from the top drop-down menu, and select a system alert sound (either your own or one of Apple's) from the second drop-down menu that appears. Then close the window to open the Save dialog, and click Save. Repeat for all the other VIPs.



An email from Ed McMahon? Hey, it could happen!

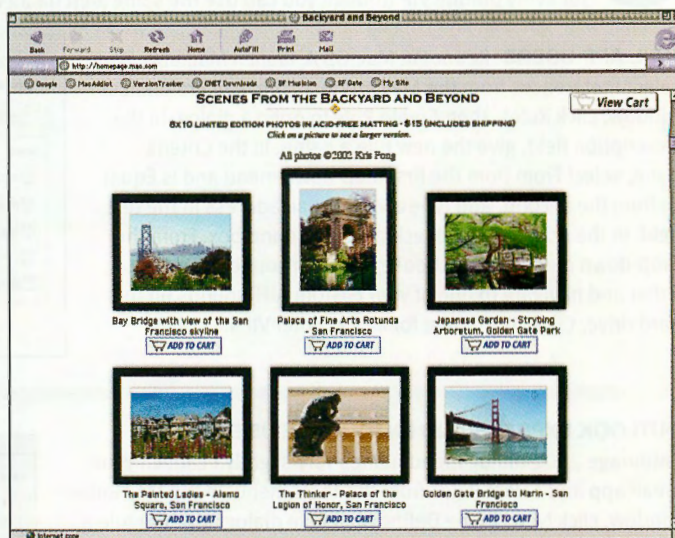
Jason Whong is so easily distracted that he can't stop himself from switching to his email app even when he knows it's not important.

Make Money from Your Web Site

by Gary Marshall and Kris Fong

The dot-com boom may have gone bust, but that doesn't mean that the World Wide Web has become an impoverished third-world wasteland. In fact, with a little know-how, you can easily turn your HTML code into cash. Whether you just want a few extra bills for your beer fund or are determined to make *home sweet home* your new 9-to-5 establishment, we show you how you can make money from your Web site (four easy payments of \$19.99 not required).

If you've got flat out nothing to sell (except maybe your soul), you can make some spare change just by adding a bit of code to your Web page that refers your visitors to big business e-tailers. And if you're already hocking products in the real world, setting up an online shop is a no-brainer—we show you how to turn your site into an e-commerce entity that'll spare your achy soles from peddling your garbage...er, wares door-to-door.



Whether you're a creative type or a leach, you can make a few extra bucks from your Web site with little effort.

Get Companies to Pay You



WHAT YOU NEED

- Your own Web site

Want a little easy money? Then team up with the big boys, and turn clicks into cash. Depending on your Web site's content, you can become an affiliate of an already established Internet behemoth. For example, maybe you're an avid reader and music fan and have a list of favorite books and CDs on your Web site; you can become an *associate* of Amazon.com (www.amazon.com) and link your listed items to the relevant Amazon sell pages. If visitors follow your links and buy a book or CD you've recommended, Amazon will pay you a 5- to 15-percent commission. Not bad for doing nothing—and it's free.

Got junk you want to unload? Become an affiliate of eBay (www.ebay.com) and pocket an extra \$5 for every person who registers with eBay and places a bid directly from your site link. eBay will also throw you a precious nickel for every qualified bid placed from a link funneled from your site to eBay. CD Universe (www.cduniverse.com) pays you a 7- to 15-percent commission on any CD, video, or game purchase made from your link. Buy.com (www.buy.com) pays a commission of up to 10-percent on its glut-o'-stuff. PETsMART (www.petsmart.com) pays a 15-percent commission on sales from new customers driven to their site by your site, and a 5-percent commission for repeat buyers.

You'll find plenty of other potential money-making opportunities listed on Web affiliate directory sites, such as Web Affiliate Programs (www.webaffiliateprograms.com) and Associate-It (www.associate-it.com). You can also opt to host Web banners where companies give you ads to display on your site and pay you per click or *impression* (view only). These are harder to wrangle, and many have strict guidelines—for example, most won't advertise on personal Web pages, and urging visitors to click ad banners is a no-no. However, if your site gets a lot of traffic, you can join a banner *network*, an association of Web entities with

Affiliate Program

Welcome

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Link to PETsMART.com from your web site and receive 10% commissions on all new customer orders that originate from your site and 5% commissions for all repeat or returning customer purchases!

1. Sign Up

Complete our easy online application. When we receive your application, we'll send you an email with instructions on how to create your links to PETsMART.com.

2. Copy a Link...

Choose from a variety of storefronts, banners, product and text links - the code is automatically created. Copy the code into your site's HTML source file, upload, and the banner appears on your site. You don't need to be an HTML expert - creating links is simple!

3. Start Earning!

Many e-tailers, such as PETsMART, feature affiliate programs that pay you cash for purchase referrals.

similar visitor bases that can expand visitor traffic to your site while cross promoting other sites and advertisers—one of the biggest is ValueClick (www.valueclick.com).

But before you sign up for every affiliate opportunity available with dreams of million-dollar mansions in your future, get real: You're not going to make buttloads of cash from these programs. You may, however, scrape up enough cash now and then to spring for a pizza. It's a good idea to be wary, too—some unscrupulous companies are really pyramid schemes or are trying to sell you a franchise. Watch out for any program that asks for a set-up fee, is described using lots of capital letters and exclamation points, or expects you to recruit family and friends.

Setting up your site to become an affiliate is a similar process among e-tailers. We demonstrate the procedure here, using Amazon.com's Associate Program.

1 Fill Out the Application Go to www.amazon.com, scroll down to the bottom of the page, click the link in the Associates box on the left, and follow the links to the sign-up form. Make sure you read the Operating Agreement. Then provide basic info like your name, address, phone number, and email; your tax ID or social security number; method of payment (you can get paid by check or Amazon.com gift certificate); your Web site URL; and a brief description of your site and what you intend to list. Click Submit when finished.

The screenshot shows the 'Amazon.com Associates Program: Application' form. It includes sections for 'Choose Your Payment Method' (radio buttons for gift certificate or check), 'Describe Your Web Site' (fields for name, URL, and how you learned about the program), and 'Your Intended Listings' (a text area for describing products to link).

To link items mentioned on your site to Amazon.com, fill out Amazon's Associate Program application.

2 Get with the Program The folks at Amazon will review your application and Web site, and either approve it (if your site is completely angelic) or reject it (if your humor is of the potty variety or worse). If approved, Amazon will provide you with info and guidelines to link products on your site to its own site, give you graphics to display, and send you special tagged links for tracking purposes. Then simply sit back, and let your Web site start working to buy you dinner.



Once your site is approved, stick in the graphics, paste in the special links, and pray for heavy traffic.

Set Up an Online Shop

EASY

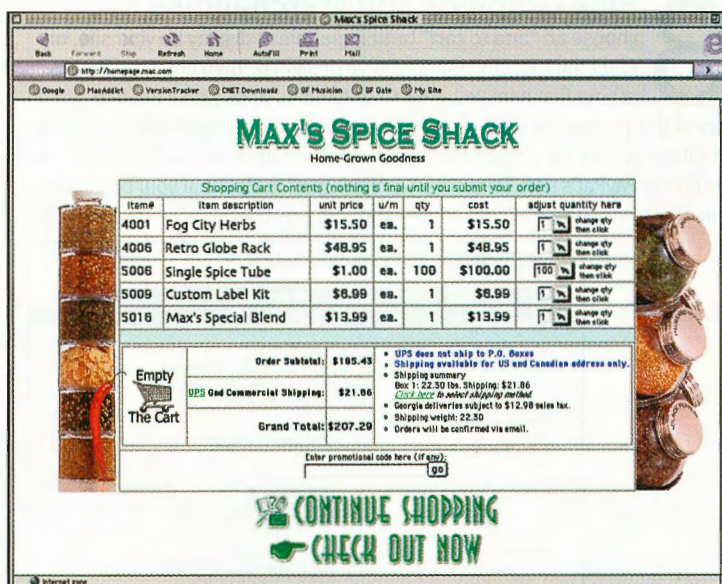
WHAT YOU NEED

- Your own Web site
- Products to sell (or a made-to-order company you can link to)

Money made from affiliate programs is mere chump change compared to the amount of cash you can pocket by setting up an online shop. Depending on what you sell, you may have a solid, home-based business in your future. And for those of you who think you've got nothing to peddle, you don't even need to make anything, invest money to have stuff made, or invest in any merchandise inventory to sell things—all you need is a bright idea and the determination to put it to use.

At CafePress (www.cafepress.com) you can design your own T-shirts, coffee mugs, baseball caps, and other tchotchkes, then build your own online shop and display your designs for sale. You supply CafePress with your design work, and they operate transparently to your customers, manufacturing all orders placed from your site and shipping stuff directly to your customers. The company charges a base price for different merchandise so any retail price you set above base is pure profit for you.

If you've got your own goods to sell, whether it's exotic cheeses or caricatures of Steve Jobs, you can make bucks by posting pictures, descriptions, and prices of your products on your site, adding a shopping system (it's easy), and promoting your site like hell. Payment services such as PayPal (www.paypal.com) and WorldPay (www.worldpay.com) take care of the payment processing; all you need to do is add "buy now" buttons (or the like) to your pages.



Got stuff to sell? Be your own crabby boss and set-up a virtual store with help from a payment service.

Most payment services work roughly the same way. For example, if you're a PayPal business member, PayPal takes a cut of each transaction (between 0.7- and 2.9-percent) in exchange for processing the payment (credit cards and checks) on your products. Unless you really want to obtain a business license; sign up with Visa, Master Card, and American Express to do your own credit card transactions; and pay card companies the standard transaction fee (about 2 to 4 percent of the total purchase) payment services are the way to go for entrepreneurs and small businesses. Here's how to add credit card ordering on your Web site with PayPal.

1 Sign Up as a Business Member Before you can start accepting credit card payments, you need to become a PayPal member. Go to www.paypal.com and click the Sign Up For Your Free PayPal Account link. Then sign up for a business account by filling out the required info, including your name, address, email, password, and credit card details. To test your account, PayPal will post a small credit to it and quote a reference number. You'll need to get this reference number from your credit card statement to finish the sign-up process—this can take a few days.

To enlist PayPal's services, become a member—here, we provide our vital stats on its sign-up page.

2 Choose Your Sales Tool Once you've got the reference number, log back into PayPal's site, enter the number in the appropriate field, and follow the prompts to finish the process. Then use your email address and password to log into the PayPal site and click the Sell tab at the top-right corner of the page. Under the Web site payments header, PayPal lists its selling options, including Shopping Cart for those who stock products in inventory for purchasing, Single-Item Purchases if you're selling sole items, and Donations, which enables you to add "begging buttons" to your pages. Click the link for the type of sales tool you desire. For our site, we chose Shopping Cart.

PayPal provides a few sales options you can use to tailor the payment process to your type of business.

3 Pick Graphics and Merchandise Next, choose an "add to cart" button graphic to display on your site, or enter the URL of a button you've designed. Then enter the details of your first item you want to sell and its price (you'll need to repeat this process for multiple items). If you want to charge extra for delivery or sales tax, click the appropriate link to set these up in your account's Profile section of PayPal's site. Then select a "view cart" button that your customers can click to view the contents of their shopping cart.

List items for sale one at a time, and PayPal generates HTML code for you to paste into your site.

4 Paste In the Code Once you've entered all the details, click Continue. PayPal will generate some HTML code—copy the string posted in your browser, and paste it into your Web design program or text editor for the appropriate sales item. To add additional items, repeat steps 2 and 3, and again, paste the code into your Web page. Once you've added all your items, save your HTML document and upload it. Now go out and start promoting your site!

Qty	Remove	Description	Item ID	Price
1	<input type="checkbox"/>	MacAddict Subscription	Sub001	\$24.00
Subtotal				\$24.00
Shipping				\$0.00
Handling				\$0.00
Total				\$24.00

Once you've pasted in the code and uploaded your page, type in a bogus order to make sure everything adds up correctly.

Though Gary Marshall and Kris Fong both hold esteemed jobs at high-profile Mac magazines on opposite sides of the globe, they're always looking for an easy way to make a buck (or pound) or two.



Get Smart

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The FireWire Drive with a technician built in.

Ever wondered what's really going on inside that box? With the new line of **SMART Drives** from Granite Digital, you will never have to wonder again. This FireWire IEEE1394 enclosure includes a Microprocessor and LCD display that will tell you everything you ever wanted to know about your drive's condition. It's like having your own technician built into every case. The case also monitors drive performance for speed-intensive operations like DV and AV and it helps keep your data safe and secure.

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Unlike other FireWire companies, Granite writes its own firmware and supports more drives than anyone else. Our easy to use upgrade and browser utilities keep us ahead of the competition while giving our customers the information that they need....spoil yourself and Get Smart.

Get Hot

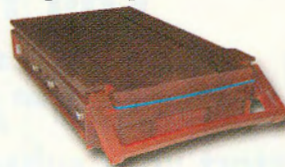
Hot-Swap that is. The new Granite **FireWire Hot-Swap Drive** is one of the most versatile storage systems on the market. With the low cost of IDE hard drives you can now affordably use hard drives to backup your computer, transport large amounts of data, dedicate drives for projects, and completely eliminate the need for tape drives and other archival systems. It's the ideal solution for your removable storage needs, and it is faster than all other types of archival systems.

The key to our **FireWire Hot-Swap Drive System** is our low cost hard drive trays. These affordable trays hold low cost IDE hard drives. Both Macintosh & Windows 98SE, ME, 2000, and XP are completely supported without the need of any software or additional drivers...just plug it in and you are up and running.



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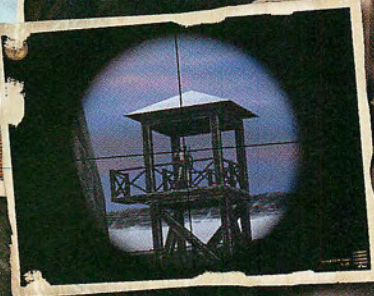
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ACTUAL WWII SCENARIOS,
INCLUDING D-DAY.



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HEADQUARTERS, DRIVE A KING
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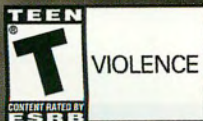


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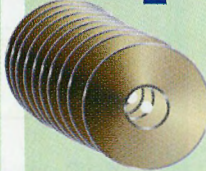
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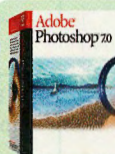
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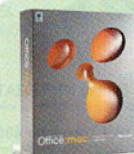
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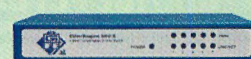
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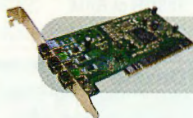
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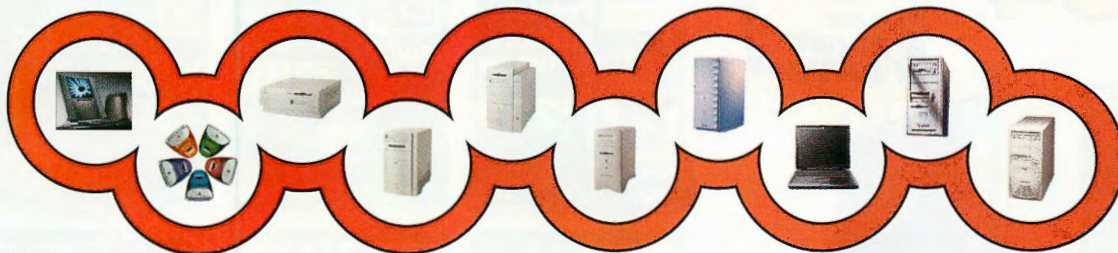
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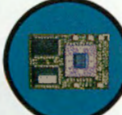
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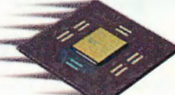
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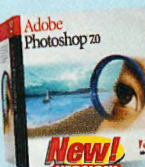


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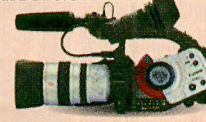
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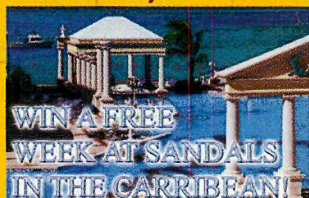
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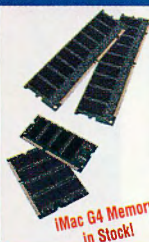
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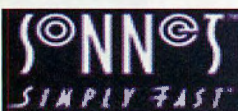
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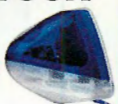
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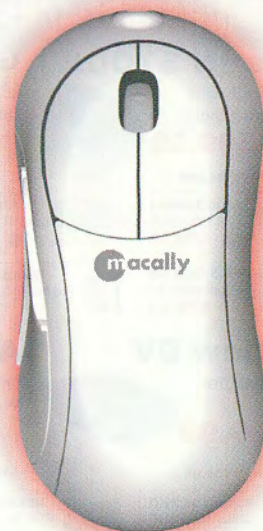
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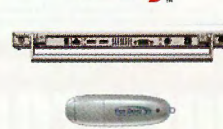
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LETTERS

TURN ON, iTUNE IN,
iDROP OUT

I can't wait to leave the office when I have a new issue of *MacAddict*. I put on my iPod and walk to the train. It takes exactly 27 minutes to get to Union Station in Chicago from where I work downtown. All that while, I ponder the cover of your magazine. I refuse to open the first page until I have boarded the train and plopped my ass down in the upper section of the car. I dig into the contents page while my iPod provides a soundtrack. Once I'm there, I leave the worries of the world behind and become completely engrossed in your magazine.—*John A. Yelen*

You walk through downtown Chicago while pondering our cover? Ever walk into a wall, dude?—*Max*

BIRD WATCHING

Where has your irreverent attitude gone to, the Dark Side of publishing hell?—*Joey Brassell*

Oh yeah, where *did* I put that? Wait...let me check my pockets...oh, lookie! I found something for you!—*Max*

DESIGNERS
START YOUNG

The June 2002 issue look like it got beaten by someone from PC mag! Have jenny craig been consulted you guy on design a logo? c'mon guy! I though I let you guy know, What do I knew? I'm only 11.—*Scott*

Live with the new logo for a year, then write me back when you're 12 and tell me if it's grown on you. OK, you guy?—*Max*

PARDON ME
WHILE I PANT

I'm a freshman at Stanford University and a huge fan of *MacAddict*. After purchasing my first Mac, I was inspired to write the following poem, titled "eLation," about my blissful experience with my Apple iBook: i see 4.9 lbs. of ivory wonder waiting expectantly on my desk like an early morning snowfall i open the beaming Mac greets me warmly i type my cocoa fingers dance over the milky white keys cool plastic and warm flesh melding together as One —*Jessica Williams*

i know that the lust that's implied in your last verse is well justified, but is it just me, or does it seem to be just a hint your love life's at low tide?—*Max*

IF ONLY

I loved the proposed iDate software in *Shut Down* (Jun/02, p96). I appreciate the reference to the Pan-Galactic Gargle Blaster (the world is not the same without Douglas Adams), and secondly, the gaydar feature. We have a friend who is gay, and my wife is always trying to set her up. Unfortunately, my wife has faulty gaydar. She could really use the iDate software, and it would give me a good excuse to get an iPod.—*Scott R. Colson*

Unfortunately, our attempts to market the iDate software have been squelched by the ruthless corporate lobbying of TV dating shows.—*Max*



Ye'll neigh see haggis smudges on my ayePod, er, iPod!

ANOTHER EARBUD
MISCONCEPTION

Your magazine repeatedly shows the iPod's earbuds without the foam pads that ship with every unit. First, your reviewer complained about the sound and comfort of the iPod's earbuds (Reviews, Feb/02, p44). Second, Scottish-born Apple engineer Angus Pàidean showed them off on your humor page (*Shut Down*, May/02, p96). Two amazing and wonderful things happen when you place the foam pads on the earbuds: They actually feel

comfortable, and you extend the bass dramatically.—*Jerry Bauck Laddie*, yer all wrong wi' the idea for that pair of fluffy bits that come wi' the iPod—they're for the tips of ye fingers! Aye, just put them on yer digits an ye'll ne'er smudge yer iPod whilst vigorously fingering it after handling the odd bit of haggis or the sticky spilled pint.—*Angus Pàidean*

THE PROPER TERM
IS BREASTS

Regarding the June 2002 *MacAddict* Disc jacket artwork:

FEATURE FEEDBACK

Boy, did you love and hate our special report, "Your Hands-On Guide to the Digital Good Life" (Jun/02, p20).

The feature articles in your June 2002 issue are the most relevant articles to me that your magazine has ever published.—*Bob Vandegrift*

The digital-camera and video-cam pages are excellent, and the new PDA and MP3 articles are just what I wanted!—*IntegraG4*

Mad props to Kris Fong and Andrew Tokuda for your easy-to-understand guide, and to Andrew Tokuda for the nifty PDA section.—*Dapple*

Based on the PCish nature of the most recent issue, I can only assume that your rag is about ready to bite the dust.—*Gerald Zahn*

Hey, drop by my office someday, smart-ass, and we'll see who bites the dust.—*Max*



WRITE TO US!

MacAddict, 150 North Hill Dr.,
Brisbane, CA 94005
or letters@macaddict.com

FOR CD PROBLEMS:

Go to <https://secure.imaginemediacom/disc>

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Call (toll-free) 888-771-6222

LOG OUT 95

Woo-hoo, boobies!—Ken Cox

Ken, Ken, Ken. The female form does not exist so that you can get your jollies, so that developers can have something besides code to stare at, or so that we can sell magazines. The real reason that babe appears on the Disc jacket is...well...uh...—Max

CORPORATE PUNISHMENT

I need to lock my kid out of my computer. Is there anything I can do?—Unidentified parent

You can set up user names and passwords in Mac OS X, but locking your kids out of your Mac is like locking them in the closet and throwing away the key. Studies prove that Mac deprivation during childhood results in an inability to have normal adult relationships later on—look what it did to poor Bill Gates.—Max

YOU WON!

Winners of the Mac-Your-Own-Adventure Contest

Congratulations to the three winners of the April 2002 Mac-Your-Own-Adventure Contest (*Shut Down*, Apr/02, p96). They wrote some crazy fill-in-the-blank stories about Steve Jobs and new Apple stores and won our signature get-off-the-couch kit, including a MacAddict-branded camping chair, football, and beach towel.

FIRST PLACE Jean G. Ulman

"It's a wondrous day in 3003, the year of the Condor according to Cupertino culture."

SECOND PLACE Aaron Millikin

"To pump himself up, he picked his nose to the tunes of Metallica on his iRefrigerator."

THIRD PLACE Dale Price

"Microsoft abandoned the PC sector to create Mac-compatible TVs."

WIN A STAR WARS LIGHTSABER

Play Our Extremely Fanatic *Star Wars* Trivia Quiz

We're so excited that Aspyr Media is bringing *Star Wars* Jedi Knight II:

Jedi Outcast to the Mac (see *Get Info*, p15, for more information) that we, along with Aspyr, want to give you a Master Replicas Anakin Skywalker Lightsaber (a \$129 value).

To play, just fill out Our Extremely Fanatic *Star Wars* Trivia Quiz.

To win, you must answer all trivia questions correctly and come up with the funniest, craziest, most satisfying obituary for the most annoying *Star Wars* character of all time: Jar Jar Binks.

We must receive all entries by **September 15, 2002.**

Winners will be announced in the December 2002 issue of *MacAddict*.



OUR EXTREMELY FANATIC STAR WARS TRIVIA QUIZ

1 In *Episode VI—Return of the Jedi*, which one of the following is the correct sequence of steps to reverse carbon freezing?

- A) Press both buttons on the wall to lower the slab of carbonite, then turn the upper dial.
- B) Turn both dials on the wall simultaneously to lower the slab, then press the one white button on the side of the carbonite slab.
- C) Press the lower of the two buttons on the wall to lower the slab, then turn the lower and then the upper dials on the side of the slab.
- D) Put your right foot in, put your right foot out, put your right foot in, and shake it all about.

2 In *Episode IV—A New Hope*, what are the following pilots' call signs (in order): Dutch, Biggs Darklighter, Jek Porkins, Luke, and Tiree?

- A) Gold Leader, Red Three, Red Six, Red Five, Gold Two
- B) Red Leader, Gold Three, Red Six, Gold Five, Red Two
- C) Gold Leader, Gold Three, Red Six, Gold Five, Red Two
- D) Pisces, Virgo, Aquarius, Libra, Cancer

3 Who or what was IG-88?

- A) A droid bounty hunter, one of a group summoned by Darth Vader to his Star Destroyer for the purpose of tracking down Han Solo in *The Empire Strikes Back*.
- B) The red droid that Luke's Uncle Owen bought from the Jawas. It broke down soon after Owen made the deal, resulting in the choice of R2-D2 instead.
- C) Jabba the Hutt's droid overseer, responsible for assigning C-3PO to service as Jabba's interpreter droid and R2-D2 as a drink server on Jabba's Sail Barge.
- D) The freeway connecting the planets Hoth and Endor.

4 What was the name of the species of green lizard creatures that Stormtroopers rode on Tatooine?

- A) Bantha
- B) Dewback
- C) Tauntaun
- D) Muppet

5 Write an obituary for Jar Jar Binks in 100 words or less. (If we have to read more than 100 words, we'll tear our eyes out and you will be disqualified.)

Contestant Information

Full Name: _____
Address: _____
City: _____
State: _____
Zip: _____
Phone or email: _____

Send contest entries to:
Games Contest, *MacAddict*
magazine, 150 North Hill Dr.,
Brisbane, CA 94005

Send email entries to:
contest@macaddict.com
Subject: Star Wars Contest

Deadline for entry:
September 15, 2002

Contest Rules

The judges will be *MacAddict* editors and they will base their decision on the following criteria: Winner will answer questions 1 through 4 correctly and come up with most creative response to question 5. One entry total per individual. All entries must be received no later than September 15, 2002, with the winner announced on or around December 4. Judging criteria for questions 1 through 4 will be the correct multiple-choice answer. Judging criteria for question 5 will be 50 percent creativity and 50 percent humor. By entering this contest you agree that Imagine Media may use your name, likeness, and Web site for promotional purposes without further payment. All prizes will be awarded and no minimum number of entries is required. Prizes won by minors will be awarded to their parents or legal guardians. Imagine Media is not responsible for damages or expenses the winners might incur as a result of the contest or the receipt of a prize, and winners are responsible for income taxes based on the value of the prize received. A list of winners may also be obtained by sending a stamped, self-addressed envelope to Imagine Media, c/o *MacAddict* contest, 150 North Hill Dr., Brisbane, CA 94005. This contest is limited to residents of the United States. No purchase necessary; void in Arizona, Maryland, Vermont, Puerto Rico, and where prohibited by law.

Win a Master Replicas Anakin Skywalker Lightsaber.



LEGO MY LOGO!

Rejected *MacAddict* logo designs.

The reader-discussion forums on MacAddict.com barely survived a full-fledged frontal assault after we changed the magazine's logo last month. Passions ran high. Unkind words were said. Kind words were said. Tempers flared. Mac addicts typed furiously on Apple Pro keyboards all over America. Everyone, it seemed, had an opinion.

- Very stylish and sleek.—*revcmoney*
- Makes me want to barf.—*iboy*
- It has a nice minimalist look.—*smartperson*
- Uglier than my hairy tongue wart!—*your name here*
- The new logo looks professional.—*frankly*
- It suxxxx (not a one-x sux, but a four-x suxxxx).—*Brainstrained*
- Much cleaner than the last one.—*DavidLetterman*
- Plain + Ugly = Windowsesque.—*Digital Jim*
- It's clean. It's crisp. It's got one calorie.—*Nog*
- I didn't even recognize that it had changed.—*Johnawalker*

While we fully respect the right of our detractors to hold strong opinions, we do take exception to those who implied that we made too hasty a decision in adopting our clean, crisp new logo. In the interests of full disclosure, here are five rejected logos, the design philosophies that inspired them, and the reasons for their rejection.

1 HighlighterAddict

Pros: Simulated use of felt-tipped highlighting pens provides a lively, relaxed, contemporary look, with a warmth of spirit not unlike that one experiences on encountering a multitude of office supplies.

Cons: Looks like crap.

2 KidPixAddict

Pros: Wacky, innocent, pure typeface brings back delightful early-childhood memories of carefree days, lighthearted indolence, colorful balloons, violent Saturday-morning cartoons, and fudge.

Cons: Looks like crap.

3 SartreAddict

Pros: Two contrasting handcrafted fonts speak to the ever-challenging duality of the human condition, with a thick, masculine font instilling a fleeting—albeit well-justified—fear in more-complex, feminine, cursive glyphs.

Cons: Looks like crap.

4 KielbasaAddict

Pros: In honor of our editor in chief's pride in his forebears, this saucy sausage-link font inspires a hunger for learning; a superheated background evokes passion, secret pleasures, and Eastern European guilt.

Cons: Looks like crap.

5 FrooFrooAddict

Pros: While Apple's design ethic may be rooted in minimalism, this *très élégant* font treatment prophetically points toward a style-conscious future that wittily tweaks the rococo conventions of asymmetrical ornamentation.

Cons: Looks like crap.



The missing piece of the Mac OS X puzzle



Introducing Drive 10 version 1.1. Optimizes and defragments your Mac OS X drives and much more.

For Apple's next-generation operating system, you'll need a next-generation disk utility. That's why Micromat has introduced Drive 10, the first and final disk utility for Mac OS X. Problems with your drive? Drive 10 can repair almost any drive problem with one simple click of your mouse. All within Mac OS X's native environment.

And with the introduction of version 1.1, you can now optimize and defragment your Mac OS X drive from within Mac OS X. Plus, we've added a whole host of new repair routines that allows you to find and correct drives problems that other utilities would simply abandon.

Drive 10 is a world-class diagnostic and repair utility. Using time-tested routines developed exclusively for Mac OS X, Drive 10 offers many tools for checking and repairing any drive on your system. The included Drive 10 CD-ROM will boot your machine to repair hard drives that won't even appear on the desktop.

Don't entrust your Mac OS X drive to ancient and outdated utilities. Protect your data and drive safely with Drive 10.



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